

SONY

DIGITAL AUDIO RECORDER

PCM-800

REMOTE CONTROL UNIT

RM-D800

INTERFACE BOARD

DABK-801

MAINTENANCE MANUAL

1st Edition

PCM-800 Serial No. 20001 and Higher (UC)

PCM-800 Serial No. 50001 and Higher (CE)

RM-D800 Serial No. 10001 and Higher

DABK-801 Serial No. 10001 and Higher

CAUTION

Danger of explosion if battery is incorrectly replaced.

Replace only with the same or equivalent type recommended by the manufacturer.

Dispose of used batteries according to the manufacturer's instructions.

Vorsicht!

Explosionsgefahr bei unsachgemäßem Austausch der Batterie.

Ersatz nur durch denselben oder einen vom Hersteller empfohlenen ähnlichen Typ.

Entsorgung gebrauchter Batterien nach Angaben des Herstellers.

ATTENTION

Il y a danger d'explosion s'il y a remplacement incorrect de la batterie.

Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur.

Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

ADVARSEL!

Lithiumbatteri-Eksplosionsfare ved fejlagtig håndtering.

Udskiftning må kun ske med batteri af samme fabrikat og type.

Levér det brugte batteri tilbage til leverandøren.

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Manual Structure

Purpose of This Manual

This manual is Maintenance Manual for the PCM-800 and the following optional accessories.

Optional Accessories: RM-D800

DABK-801

This manual describes the information items(alignment, block diagrams, board layouts, schematic diagrams, detailed parts list, etc.) that premise the service based on parts.

Contents

The following is a summary of all the sections for understanding the contents of this manual.

Maintenance Manual

Section 1 Service Overview

Describes specifications, DABK-801 installation, the information for the installation of the PCM-800 and the notes about the spare parts.

Section 2 Alignment and Check

Describes alignment required when the board or the major part is replaced.

Section 3 Block Diagrams

Contains block diagrams.

Section 4 Board Layouts

Printed circuit pattern of circuit boards and their printed symbols are shown in the almost same order of schematic diagrams.

Section 5 Schematic Diagrams

Contains schematic diagrams of printed circuit board.

Section 6 Spare Parts

Contains the exploded view, mechanical parts list, electrical parts list and accessory list of the spare parts.

Relative Manual

- **Operation Manual**

(Supplied with the PCM-800)

This manual is necessary for application and operation of the PCM-800.

Section 1

Service Overview

1-1. Installation

1-1-1. Specifications

1. PCM-800

General

Power requirements	
USA/Canada	120 V AC, 60 Hz
Europe	230 V AC, 50 Hz
Power consumption	90 Watts
Dimensions(W×H×D)	482 × 197 × 377 mm (19 × 7 3/4 × 14 3/16 inches)
Mass	14 kg (31 lb)

Transport section

Recording format	4-rotary head digital recording
Tape used	Hi8 video tape
Number of channels	Eight plus subcode area
Recording time	108 minutes using P6/E6-120 tape 113 minutes using P5/E5-90 tape
Tape speed	15.94 mm per second
Fast forward/rewind time	Less than 90 seconds at P6/E6-120 tape (100 times play speed)
Shuttle speed	1/4 to 8 times play speed

Inputs and outputs

Digital input	25-pin D-sub × 1
Digital output	25-pin D-sub × 1
Word sync output	BNC connector × 1
Analog input	XLR connector × 8, +4 dBm (+19.5 dBu max.), 10k ohms (balanced)
Analog output	XLR connector × 8, +4 dBm (+19.5 dBu max.), 75 ohms (balanced)
Sync input	15-pin D-sub connector × 1
Sync output	15-pin D-sub connector × 1
Word sync input	BNC connector × 1
Word sync output	BNC connector × 1
Remote input	8-pin DIN connector × 1
Remote punch in/out	1/4" phone jack × 1

Audio characteristics

Sampling frequency	44.1 kHz/48 kHz
Quantization	16-bit linear
Pitch control	+/-6% in 0.1% increments
Frequency response (record and play)	20 Hz to 20 kHz, +/-0.5 dB
Dynamic range	More than 92 dB (at 1 kHz, maximum input level)
Wow and flutter	Less than measurable limits
Total harmonic distortion	0.007 % (at 1 kHz, -0.5 dB full bit)

Supplied accessories

Power supply cable
Cleaning cassette
Operation manual

2. RM-D800

General

Dimensions(W×H×D)	372 × 63 × 220 mm (14 5/8 × 2 1/2 × 8 11/16 inches)
Mass	2.5 kg (5 lb 8 oz)

Interface connectors

EXT 1	37-pin D-sub × 1
EXT 2	15-pin D-sub × 1
EXT 3	9-pin D-sub × 1
	Conforms to RS-422 specifications
REMOTE OUT	15-pin D-sub × 1

Supplied accessories

Remote control cable (5m)
Termination plug
Operation guide

3. DABK-801

General

Type Slot-in mount

Inputs and outputs

Time code input (RCA jack)

Impedance 10k ohms
Level 0.2 V p-p to 5.0 V p-p
Formats supported SMPTE 30, 29.97 Drop,
29.97 Non Drop, EBU 25,
and Film 24 Frames/second

Time code output (RCA jack)

Impedance 1k ohms
Level 2 V p-p (can be set for 0.6 V p-p)
Formats supported SMPTE 30, 29.97 Drop,
29.97 Non Drop, EBU 25,
and Film 24 Frames/second

Video Input/Thru BNC connectors

Type NTSC or PAL;
Negative sync composite video or sync composite
video signal
Level 1 V p-p, ± 0.2

MIDI input/output/thru 5-pin DIN connector $\times 3$
RS-422 9-pin D-sub Conforms
to RS-422 specifications

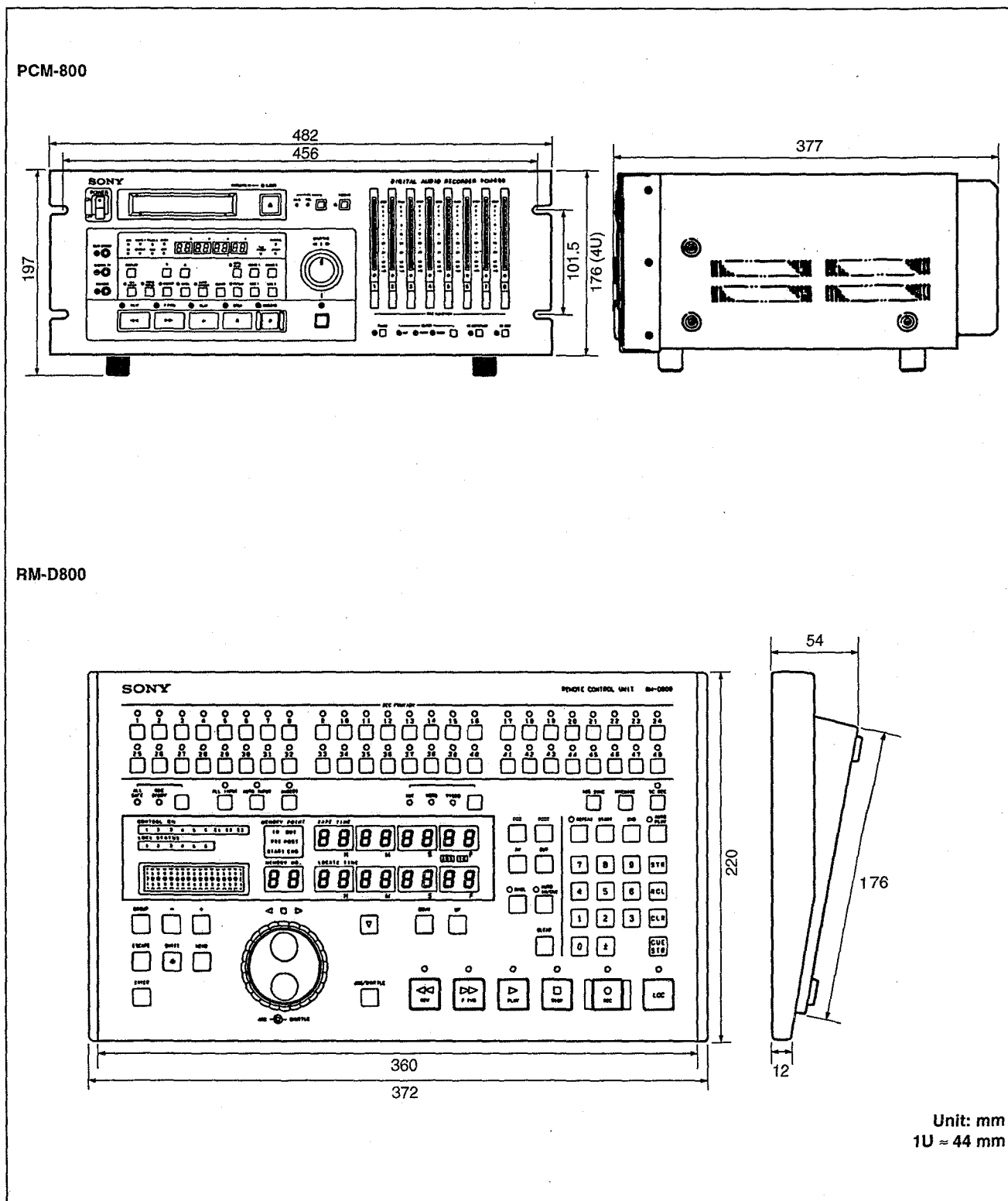
Supplied accessories

Shield panel
Screws
Operation guide

Design and specification are subject to change without notice.

1-1-2. External Dimensions

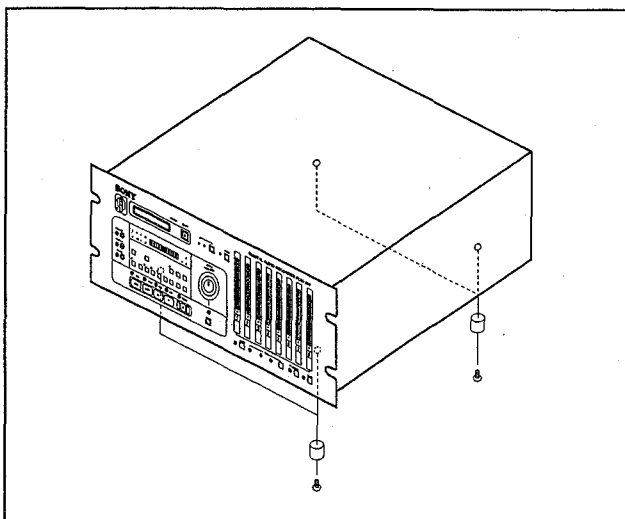
The external dimensions of the PCM-800 and RM-D800 are shown in the figure below.



1-1-3. Rack Mounting of PCM-800

PCM-800 can be mounted in an EIA 19-inch standard rack. Remove the four legs when installing the PCM-800 to rack. (Refer to the following figure)

In this time, it is not necessary to install the rack mounting rail.



1-2. Optional Board (DABK-801) Installation

1-2-1. Installation of the DABK-801

Note

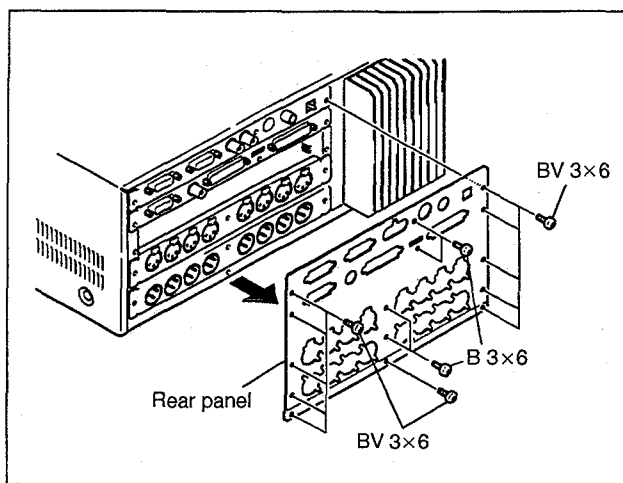
Be sure to turn the POWER of the PCM-800 off before installing of the optional board.

• Configuration

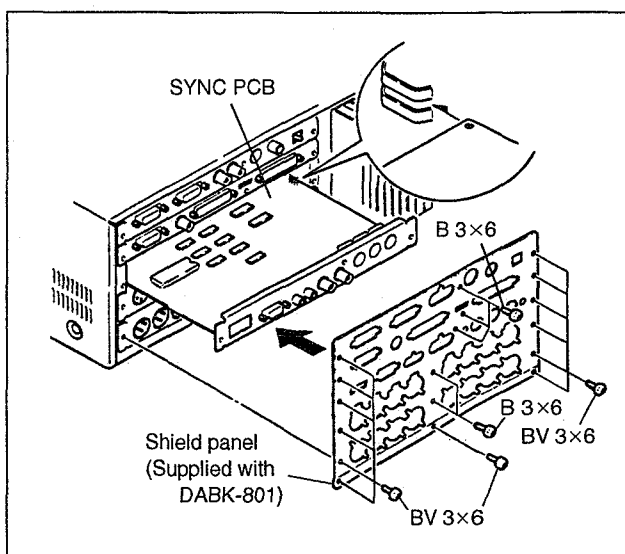
SYNC PCB	: 1
Accessories Supplied	
Shield panel	: 1
Screw (B3×6)	: 1
Screws (BV3×6)	: 2

Procedure

1. Remove the three screws (B3×6) and twelve screws (BV3×6), remove the rear panel in the direction indicated by the arrow.



2. Insert the optional board in the slot for DABK-801 as shown in the figure.
3. Using the accessory one screw (B3×6) and two screws (BV3×6), and the three screws (B3×6) and twelve screws (BV3×6) that were removed in step 1, fix the accessory shield panel.



1-2-2. Setting of the Output Level of the Time Code Signal

The output level of the time code signal from the TIME CODE connector can be changed by the following method.

Method:

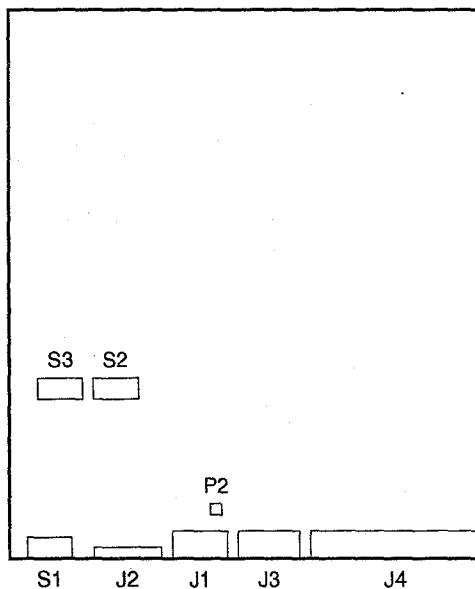
Choose the output level by plugging the short plug into either P2's LO or HI located near J1 (TIME CODE terminal, RCA pin jack) on SYNC PCB.

P2 Setting	TIME CODE Output level
Insert jumper socket into the LOW position	0.6 V p-p
Insert jumper socket into the HIGH position	2.0 V p-p

Factory setting

Insert jumper socket into the HIGH position

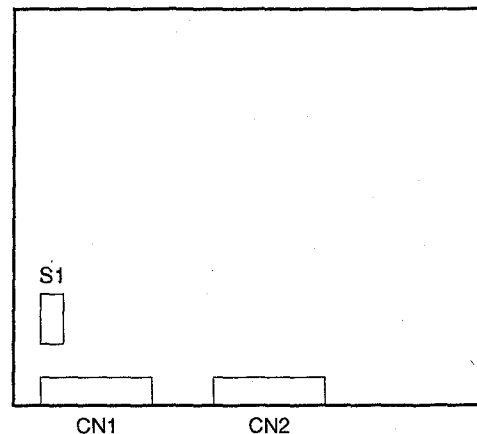
SYNC PCB



1-3. Function of on-Board Switch Settings, and Jumper Socket

1-3-1. PCM-800

DIO IF PCB (DSP PCB)



Switch

S1 (S1-1 to -8)

S1-1, 1-2, 1-3 : Sets the channel emphasis information to be used from among the digital signals input to the DIGITAL IN connector (channels 1 to 8).

Refer to the Operation Manual, "section 2-2. Rear Panel of the PCM-800", for further details.

S1-1	S1-2	S1-3	Channel for the emphasis setting
ON	ON	ON	1
OFF	ON	ON	2
ON	OFF	ON	3
OFF	OFF	ON	4
ON	ON	OFF	5
OFF	ON	OFF	6
ON	OFF	OFF	7
OFF	OFF	OFF	8

S1-4, -5 : Sets the channel word sync signal to be used from among the digital signals input to the DIGITAL IN connector (channels 1 to 8).

Refer to the Operation Manual, "section 2-2. Rear Panel of the PCM-800", for further details.

S1-4	S1-5	Pick up Channel
ON	ON	Channels 1 and 2
OFF	ON	Channels 3 and 4
ON	OFF	Channels 5 and 6
OFF	OFF	Channels 7 and 8

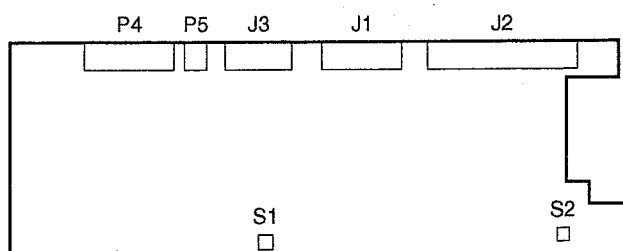
S1-6, -7, -8 : Not used

Factory setting

S1-1 to -8 : All ON

1-3-2. RM-D800

CONTROL PCB



Switches

S1 (S1-1 to -4)

S1-1 : MEMORY ERASE mode setting switch

S1-1 Setting	Description
OFF	Normal mode
ON	MEMORY ERASE mode

S1-2 : Command output from EXIT 1, 2 connector setting

S1-2 Setting	Description
OFF	The command is not output from the EXT 1 connector.
ON	The STOP, PLAY, F.FWD, REW and RECORD commands are output from the EXT 2 connector while the commands are simultaneously output from the EXT 1 connector.

S1-3 : Event Setting and Operation Setting

S1-2 Setting	Description
OFF	Event setting and operations: Enabled
ON	Event setting and operations: Disabled

S1-4 : Not used

Factory setting

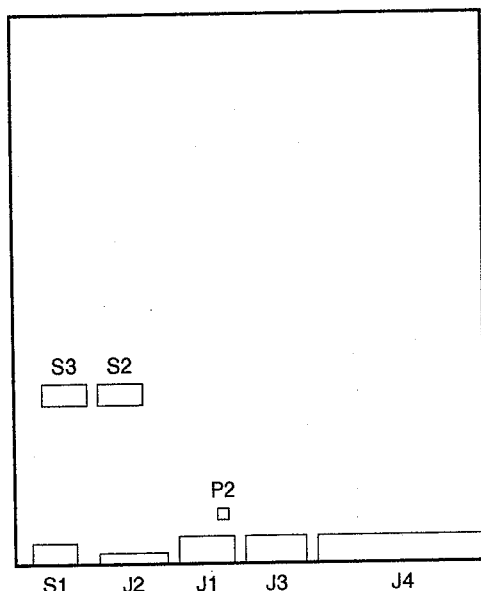
S1-1 to -4 : All OFF

S2 : RESET switch

Switch to reset CPU on the CONTROL PCB

1-3-3. DABK-801

SYNC PCB



Switches

S1 (S1-1 to -8) : MODE setting switch

Refer to the Operation Manual, "section 2-2. Rear Panel of the PCM-800", for further details.

S1-1 : Video 75-ohm switch

S1-2 : SERIAL IN switch

S1-3 : Chase mode switch

S1-4 : Rechase switch

S1-5 : Time code out timing switch

S1-6 : MIDI time code source select switch

S1-7 : Video sync playback switch

S1-8 : Controller switch

Factory setting

S1-1 to -8 : All ON (the side of the switch marked ON)

S2 (S2-1 to -8) : MIDI control setting switch

S2-1, -2, -3, -4 : Device number (device ID number) setting switch

S2-1	S2-2	S2-3	S2-4	Device Number
ON	ON	ON	ON	1
OFF	ON	ON	ON	2
ON	OFF	ON	ON	3
OFF	OFF	ON	ON	4
ON	ON	OFF	ON	5
OFF	ON	OFF	ON	6
ON	OFF	OFF	ON	7
OFF	OFF	OFF	ON	8
ON	ON	ON	OFF	9
OFF	ON	ON	OFF	10
ON	OFF	ON	OFF	11
OFF	OFF	ON	OFF	12
ON	ON	OFF	OFF	13
OFF	ON	OFF	OFF	14
ON	OFF	OFF	OFF	15
OFF	OFF	OFF	OFF	16

ON : the side of the switch marked ON

OFF : the other side

Device Numbers

To yield the DABK-801 to controllers with MMC standard, you have to number the DABK-801 the same as on the part of the controller in use.

Device numbers (also called channel numbers, device ID numbers or others) you can assign to the DABK-801 is from 1 to 16 depending on the setting of the internal switch of the DABK-801.

If the device numbers your controller can handle start from 0 (not from 1), add 1 to the device number you assigned to the DABK-801 on the part of your controller. The sum is the device number selected by the internal switch (e.g. if you assign 1 to the DABK-801 on the part of the controller, the DABK-801 must be numbered 2 on the part of the DABK-801).

If you use a single controller to control multiple units with MMC standard, each of them must have a different device number. The same is also true for the same model units (e.g. if two or more DABK-801s are connected to your controller, you have to assign a different number to each of them as you will do on the part of the controller).

S2-5 : Not used

Use in factory setting

S2-6, -7 : MTC flag command setting switch

Refer to the Operation Manual, "DABK-801
Setting for MIDI control", for further details.

S2-8 : MTC output mode setting switch

S2-8 setting	Description
OFF	The DABK-801 does not output MTC
ON	The DABK-801 outputs MTC

Factory setting

S2-1 to -5 : ON

S2-6, -7 : OFF

S2-8 : ON

S3 (S3-1 to -8) : Video editing setting switch

Refer to the Operation Manual, "section
5-11 Setting for video editing", for
further details.

S3-1 to -3 : Device ID switch

S3-4, -5 : Track wapping setting switch

S3-6 : F. F/REW speed switch

S3-7 : Edit preset from the 9-pin connector

S3-8 : Not used

Use in factory setting

Factory setting

S3-1 to -6 : OFF

S3-7, -8 : ON

ON : the side of the switch marked **ON**

OFF : the other side

Jumper socket

P2 : Sets the output level of the time code signal output
from the TIME CODE connector.

P2 Setting	TIME CODE Output level
Insert jumper socket into the LOW position	0.6 V p-p
Insert jumper socket into the HIGH position	2.0 V p-p

Factory setting

Insert jumper socket into the HIGH position

1-4. Replacing Backup Battery

A lithium battery is mounted on the following boards for
memory backup.

PCM-800 SYSCON PCB

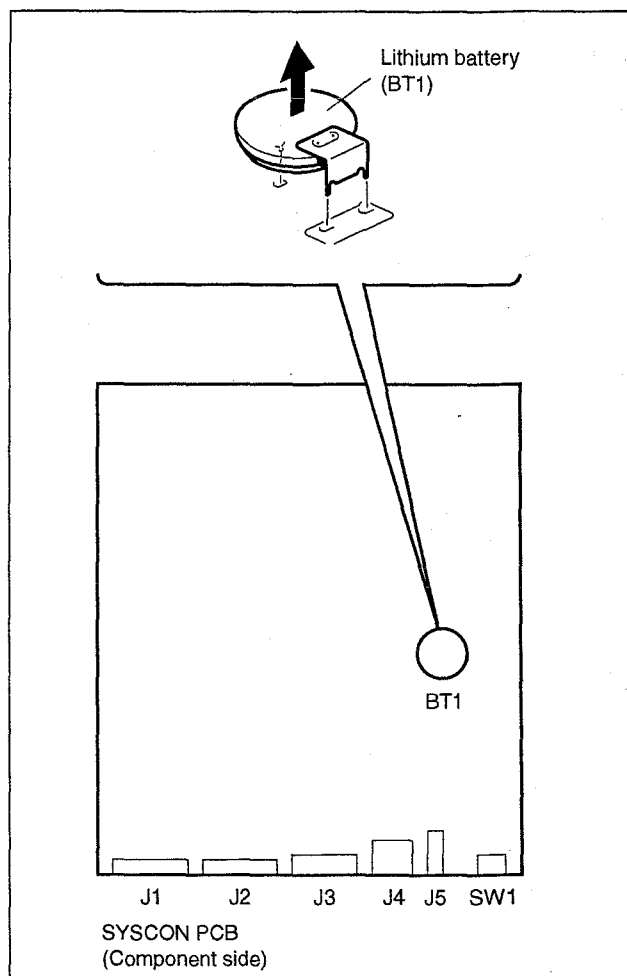
(reference No. BT1) : Lithium battery CR-2430

RM-D800 CONTROL PCB

(reference No. BT1) : Lithium battery CR-2430

When the battery on above boards run down, no message
will be displayed on the control panel of PCM-800 and
RM-D800. Therefore it is necessary to replace this battery
periodically using the operating time of the unit as a rough
guide. The standard replacement interval is 10 years
(50000 hours).

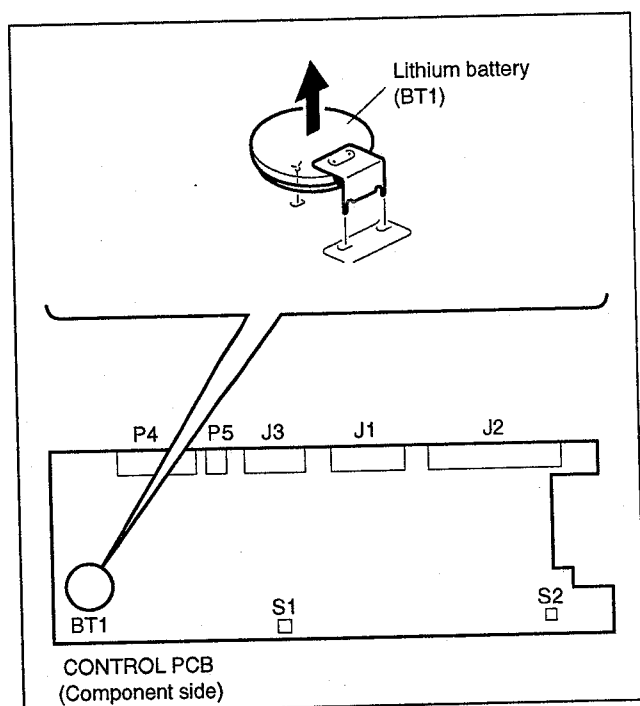
1-4-1. SYSCON PCB (BT1)



Replacing Procedure

1. Turn on the power switch of the control panel of PCM-800 and let the power flow for more than ten minutes.
2. Turn off the power switch.
3. Remove the SYSCON PCB from the PCM-800.
For details of removing, refer to "section 6-3 Exploded Views".
4. Unsolder the battery on the both sides of the printed circuit board.
5. Remove the lithium battery (CR2430) from the SYSCON PCB.
6. Install (solder) the new lithium battery (CR2430) to the SYSCON PCB.

1-4-2. CONTROL PCB (BT1)



Replacing Procedure

1. Turn on the power switch of the control panel of RM-D800 and let the power flow for more than ten minutes.
2. Turn off the power switch.
3. Remove the CONTROL PCB from the RM-D800.
For details of removing, refer to "section 6-3 Exploded Views".
4. Unsolder the battery on the both sides of the printed circuit board.
5. Remove the lithium battery (CR2430) from the CONTROL PCB.
6. Install (solder) the new lithium battery (CR2430) to the CONTROL PCB.

1-5. Service Information Display

1-5-1. PCM-800

The following service information can be displayed on the display section of the PCM-800 front panel.

1. Microprocessor version number of the SYSCON PCB display

Turn the POWER switch on while pressing the **PLAY**, **STOP** and **RECORD** keys simultaneously.

The SYSCON microprocessor version number is displayed as follows.

ex. 4E r. 1 00

2. Microprocessor version number of the SERVO PCB display

Turn the POWER switch on while pressing the **REW**, **F FWD** and **PLAY** keys simultaneously.

The SERVO microprocessor version number is displayed as follows.

ex. 5.4 Er. 2 02

3. Accumulated drum operation hours (total operation time) display

Turn the POWER switch on while pressing the **PLAY** and **STOP** keys simultaneously.

The drum's accumulated operation hours are displayed as follows.

ex. d. 00 00

4. Accumulated drum operation hours (total search time) display

Turn the POWER switch on while pressing the **F FWD** and **PLAY** keys simultaneously.

The drum's accumulated operation hours are displayed as follows.

Search time means the amount of time that the drum is rotating in all modes except playback and record.

ex. d.5 00 00

5. Test mode display

- ① Turn the POWER switch on while pressing the **F FWD**, **PLAY** and **STOP** keys simultaneously.
- ② Press the **PLAY** key within two seconds of completing step 1.
- ③ Turn the POWER key off to end the test mode.

6. Microprocessor version number of the SYNC PCB (DABK-801) display

Turn the POWER switch on while pressing the **F FWD**, **STOP** and **RECORD** keys located on the PCM-800's front panel simultaneously. The SYNC microprocessor version number is displayed as follows.

ex. 54 nc. 1 10

1-5-2. RM-D800

The following service information can be displayed on the LCD screen of the RM-D800 front panel.

Microprocessor version number of the SYSCON PCB display

- ① Turn the POWER switch on.
- ② Confirm that all LED indicators on the RM-D800's front panel are illuminated.
- ③ Confirm that the following message is displayed on the RM-D800's front panel LCD screen.

SONY

RM-D800

- ④ Press the **REW**, **F FWD** and **STOP** keys simultaneously. The SYSCON microprocessor version number is displayed on the LCD screen as follows.

ex.

RM-D800 SeLfTest

Ver1.01 95.02.08

1-6. Caution When Reassembling the Mechanism Assembly

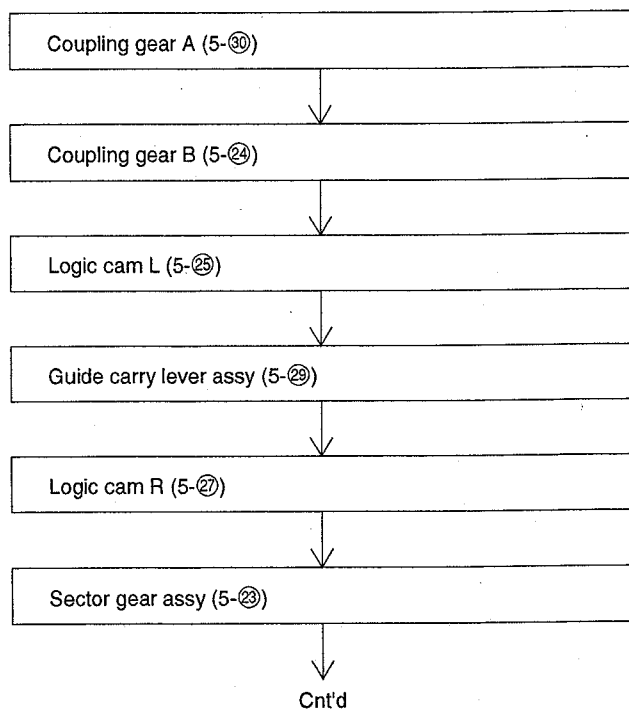
For parts that require caution when reassembling the mechanism assembly (especially critical gear meshes), the following is shown. Reassemble the parts in order of the following procedures (flowchart), and refer to "6-1 PCM-800 Exploded views".

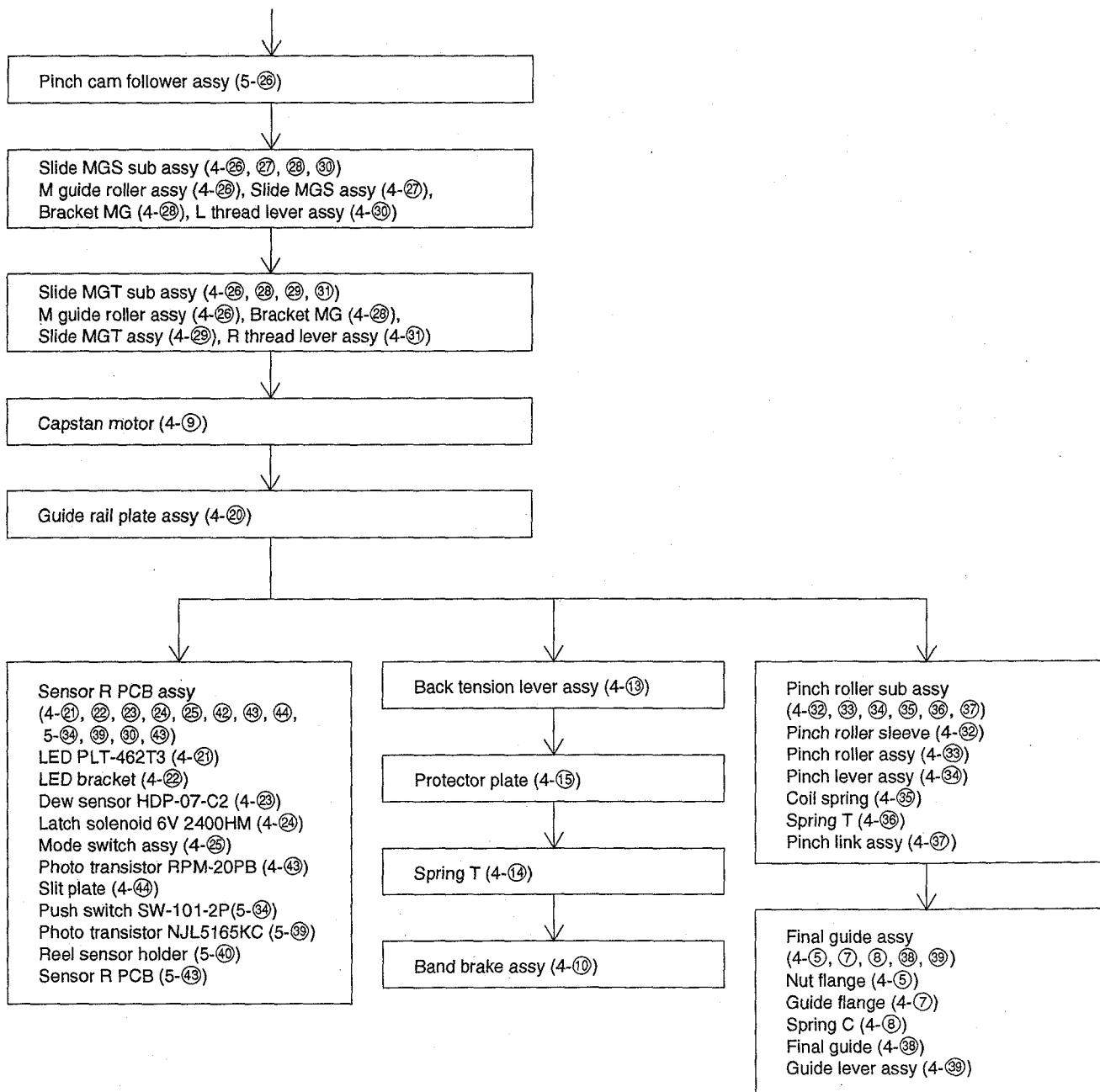
The disassembling procedures are in the reverse order of the reassembly.

Note The (x-③①) after each part name shows the reference No. in "6-1 PCM-800 Exploded views".

ex. (5-③①)
└─ The reference No. of the part is ③①.
└─ The part is illustrated in Exploded view-5.

Reassembling procedure





1. Installing Coupling gear B (5-24), and Coupling gear A (5-30)

As shown in Fig. 2, install Coupling gear B (5-24) and Coupling gear A (5-30) so that the two marks are visible.

2. Installing Logic cam L (5-25), and Guide carry lever assy (5-29)

- 1) Install Logic cam L (5-25), so that hole ③ in Logic cam L (5-25) in Fig. 3 is aligned with hole ① (Fig. 2) in the mechanism chassis. (Using a 1 mm dia. rod, pass it through the both holes to see if they are aligned with each other. Whenever checking holes for alignment after this, use this method.)
- 2) Similarly, install Guide carry lever assy (5-29) so that hole ④ in Guide carry lever assy (5-29) in Fig. 3 is aligned with hole ② (Fig. 2) in the mechanism chassis.

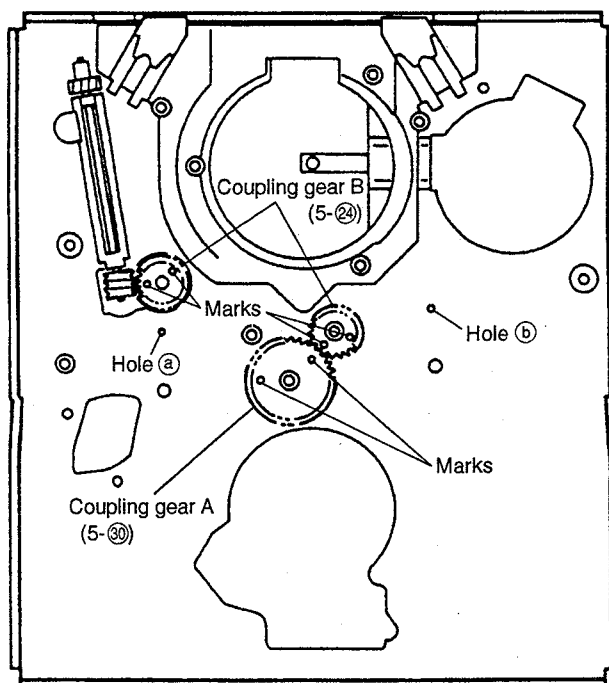


Fig. 2

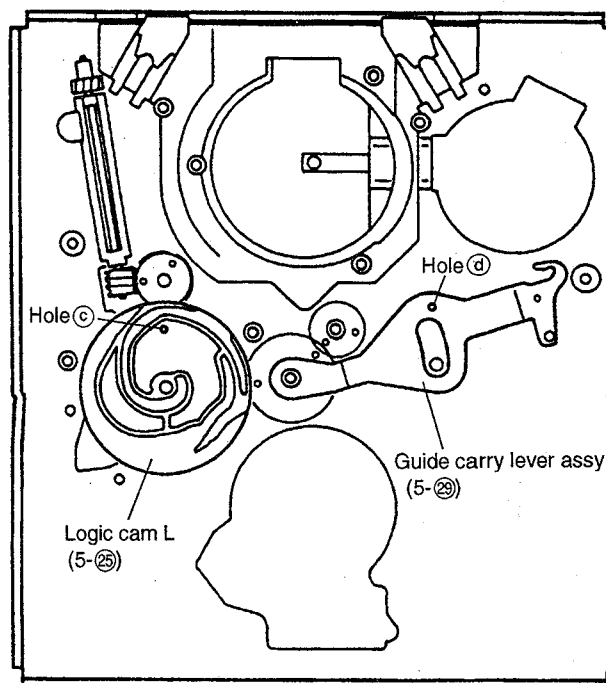


Fig. 3

3. Installing Logic cam R (5-27)

Install Logic cam R (5-27) so that hole ⑥ in Logic cam R (5-27) in Fig. 4 is aligned with the holes (hole ④ in Guide carry lever assy (5-29) aligned in 2) of 2 with hole ⑥ in the mechanism chassis).

③ in Coupling gear A (5-25) and hole ① in the mechanism chassis) are aligned with each other.

4. Installing Sector gear assy (5-23)

Install Sector gear assy (5-23) so that hole ① in Sector gear assy (5-23) in Fig. 4 is aligned with the holes (hole ③ in Coupling gear A (5-25) aligned in 1) of 2 with hole ① in the mechanism chassis).

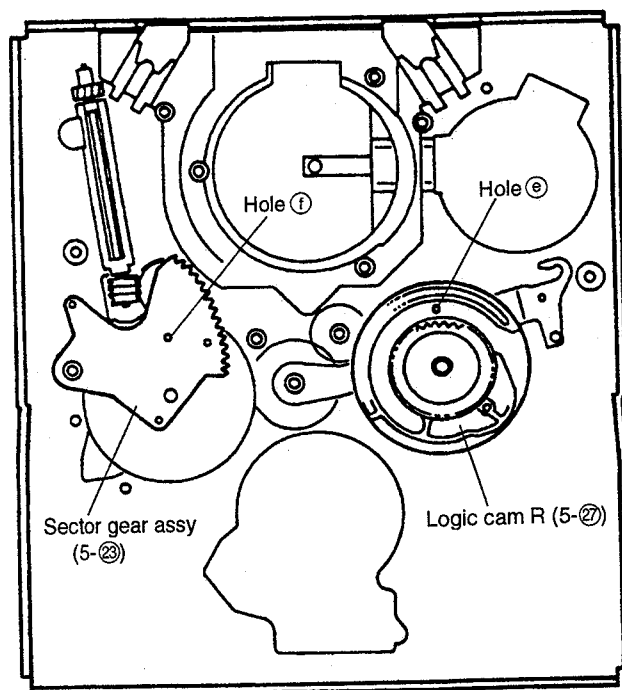


Fig. 4

5. Installing Slide MGS sub assy [M guide roller assy (4-26), Slide MGS assy (4-27), Bracket MG (4-28), L thread lever assy (4-30)]

- 1) As shown in Fig. 5, install L thread lever assy (4-30) so that mark ① on L thread lever assy (4-30) is aligned with mark ⑨ on Sector gear assy (5-23).
- 2) Insert Slide MGS into the groove of catcher ⑥ by pushing it from the direction of arrow ①. (While retracting the lever of L thread lever assy (4-30) in the direction of arrow ① with one hand, then with the other hand, push Slide MGS towards the groove of catcher ⑥ and release the hands.)

6. Installing Slide MGT sub assy [M guide roller assy (4-26), Bracket MG (4-28), Slide MGT assy (4-29), R thread lever assy (4-31)]

- 1) As shown in Fig. 5, install R thread lever assy (4-31) so that mark ① on R thread lever assy (4-31) is aligned with mark ① on L thread lever assy (4-30).
- 2) Insert Slide MGT into the groove of catcher ⑦ by pushing it from the direction of arrow ②. (While retracting the lever of R thread lever assy (4-31) in the direction of arrow ② with one hand, then with the other hand, push Slide MGT towards the groove of catcher ⑦ and release the hands.)

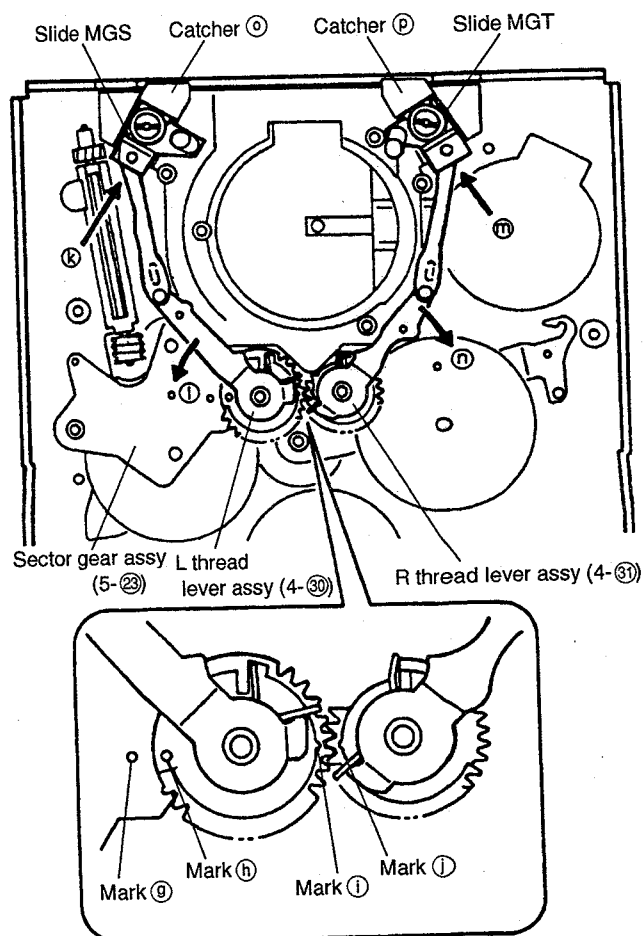


Fig. 5

7. Installing Mode switch assy (4-25)(See Fig. 6.)

- 1) Align the U groove in the PCB on the back of the gear of Mode switch assy (4-25) with the V groove in the gear by turning the gear.

Note For reasons of explanation the illustration shows a view from the gear, but in practice, you cannot see them clearly unless you see them from the PCB.

As a rule of thumb, align the mark on the gear with the U groove in the PCB behind the gear to facilitate the above positioning.

- 2) Fit Mode switch assy (4-25) over the boss on the chassis.

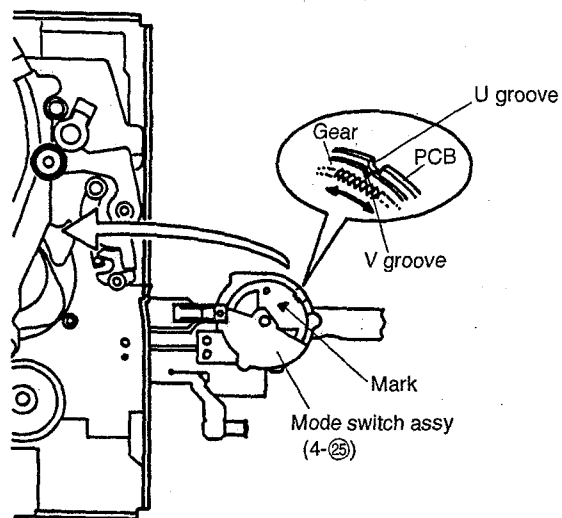


Fig. 6

8. Installing Band brake assy (4-10)

- 1) Before installing Band brake assy (4-10), fit Coil spring (4-11) to Band brake assy (4-10) as shown in Fig. 7.
- 2) After installing Band brake assy (4-10) as shown in Fig. 8, push portion A of Coil spring (4-11) downward with a rod to disengage it, then hook it over the hook of Reel lock lever (5-21).

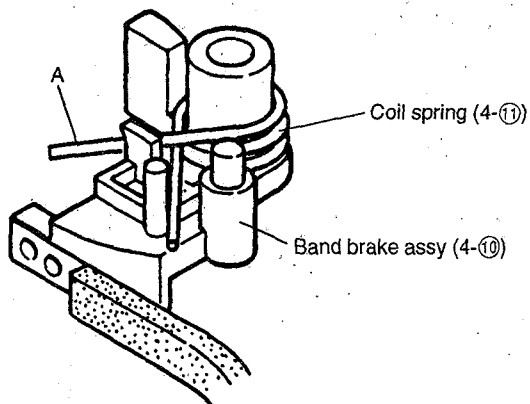


Fig. 7

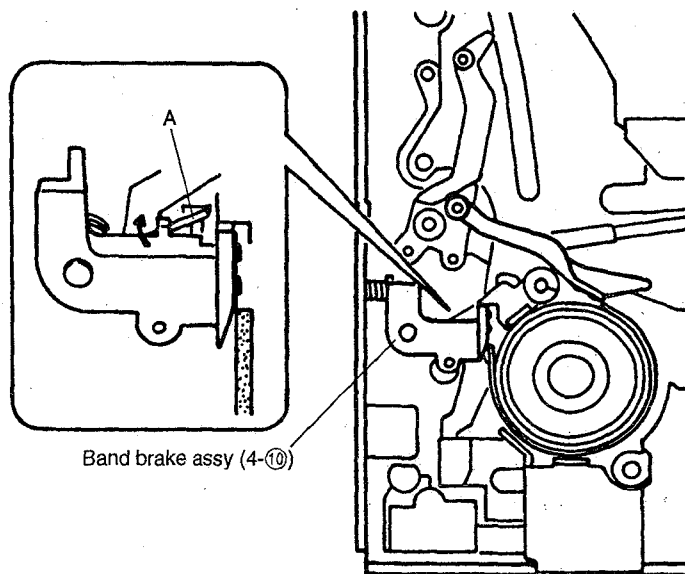


Fig. 8

9. Installing Pinch roller sub assy (See Fig. 9.)

Fit Pinch roller sub assy over the boss on the mechanism chassis, then hook spring edge A over hook B at the edge of the mechanism chassis.

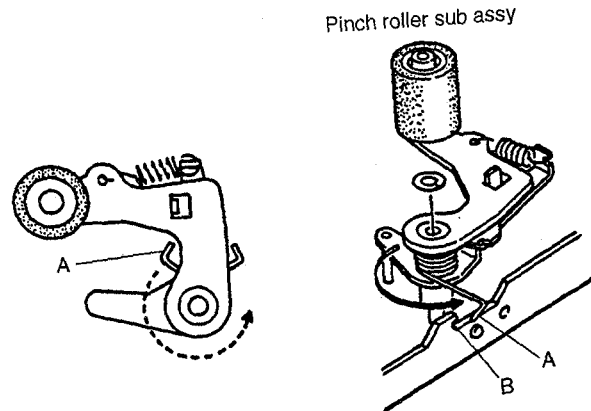


Fig. 9

10. Final checking of gear meshes

After installation of all mechanical parts is complete, check to see if gear meshes (items 1 to 7) are proper as follows:

- 1) Insert a 1 mm dia. rod into hole ④ in Fig. 10, and check to see if it passes through up to the hole in the mechanism chassis.
- 2) Insert a 1 mm dia. rod into hole ① in Fig. 10, and check to see if it passes through up to the hole in the mechanism chassis.
- 3) Check to see if the mark of Logic cam R (5-②⑦) is aligned with the V groove in the Mode switch assy (4-②⑤) gear as shown in Fig. 10.

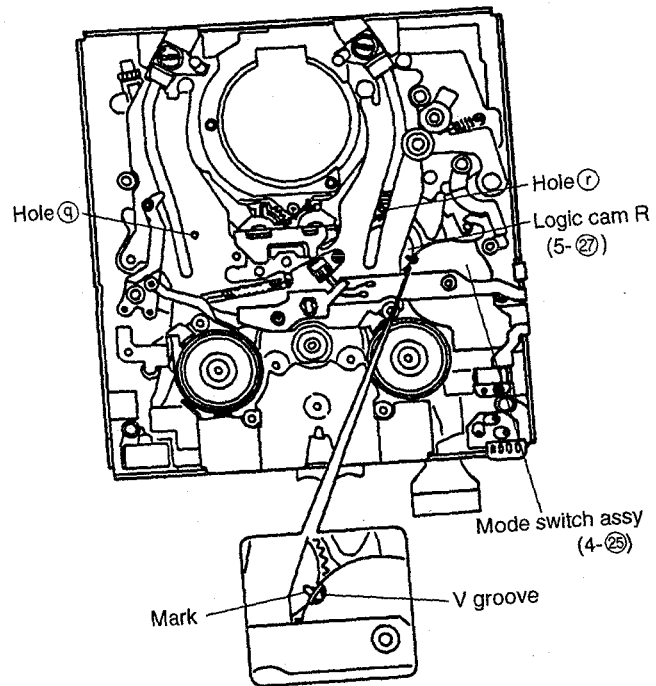


Fig. 10

Section 2

Alignment and Check

This section describes the mechanical and electrical alignment required during maintenance and servicing of PCM-800.

2-1. Preparation

2-1-1. Equipment and Tools

Equipment

Equipment	Specification (minimum)	Model
Oscilloscope	• Frequency : DC to 150 MHz	TEKTRONIX 2445, or equivalent
AF oscillator	• Balanced output	—
AF Distortion analyzer	• Balanced input	HP 8903B or equivalent
Digital multimeter	—	—

Tools

Name	Part No.	Usage
Error rate checker ERC-88	J-6402-040-A	Error rate checking
Extension PCB	J-6402-050-A	SYSCON PCB, DSP PCB, A/D PCB, D/A PCB and SYNC PCB checking
REC current kit • REC current PCB : 1 • Harness : 3 • Current pin : 1	J-6402-060-A	Recording current adjustment • Required equipment Current transformer TEKTRONIX CT-2 Termination TEKTRONIX 011-0049-01
Tape path driver	J-6082-026-A	Tape path adjustment
• Torque driver (3 kg)	J-6325-400-A	Tape path adjustment
• Torque driver bit M2 (+)	J-6325-380-A	

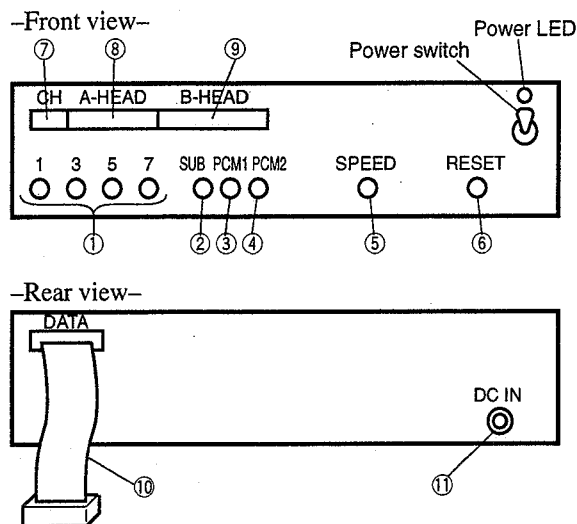
Alignment Tape

Name	Part No.	Usage
SONY WR5-1NP	8-967-995-02	Tape path adjustment
TEAC MTT-88101 (MP tape, FS = 44.1 kHz)	J-6402-070-A	Error rate, RF level and P.G. Position
TEAC MTT-88102 (ME tape, Fs = 48 kHz)	J-6402-080-A	
SONY P6/P5 - 120/90HMP1 (Blank MP tape)	Optional accessory	Recording adjustment
SONY E6/E5 - 120/90HME1 (Blank ME tape)	Optional accessory	

Torque Cassette

Name	Part No.	Usage
FWD/RVS Take-up Torque Cassette	J-6080-824-A	Torque adjustment

• Error rate checker ERC-88



Switches

- ① 1, 3, 5, 7: Select switch for error rate measurement channel
(1 ; 1/2CH, 3 ; 3/4CH, 5 ; 5/6CH, 7 ; 7/8CH)
- ② SUB : Push the this switch to measure sub code area error.
- ③ PCM 1 : Push the this switch to measure error flag C1.
- ④ PCM 2 : Push the this switch to measure error flag C2.
- ⑤ SPEED : HI MODE/LO MODE select switch for error rate indication.
This switch is used in HI MODE (LED turns off) normally.
- ⑥ RESET : Reset switch for error rate counter.

Display

- ⑦ CH : Indication for channel number selected the error rate measurement channel selection switch ①.
- ⑧ A-HEAD : Indication for A-head error rate.
- ⑨ B-HEAD : Indication for B-head error rate.

Rear panel

- ⑩ Connection cable : Connect this cable to error rate measurement connector (P114) on the MOTHER PCB (PCM-800) .
- ⑪ DC IN : Connect to a DC power supply (DC 9 V/350 mA).

2-1-2. Mode Indication

Various indications are made on the display of PCM-800.

1. How to indicate the version of the SYSCON microcomputer

While pressing the STOP key, PLAY key, and RECORD key simultaneously, press the POWER switch.

2. How to indicate the version of the SERVO microcomputer

While pressing the REW key, F.FWD key and PLAY key simultaneously, press the POWER switch.

3. How to indicate the drum's accumulated time (grand total time)

While pressing the STOP key and PLAY key simultaneously, press the POWER switch.

4. How to indicate the drum's accumulated time (total search time)

While pressing the F.FWD key and PLAY key simultaneously, press the POWER switch.

* Search time refers to the time during which the drum is rotating in modes other than PLAY and RECORD.

5. How to enter test mode

While pressing the F.FWD key, STOP key and PLAY key simultaneously, press the POWER switch; then within two seconds, press the PLAY key again.
To exit test mode, switch the power OFF.

2-2. Mechanical Section Adjustment

* Cautions when replacing the drum

When the drum is replaced, be sure to confirm and adjust the following items other than tape travel adjustments.

As for adjustment methods, refer to "2-3. Electrical adjustment":

- Adjustment of the P.G. (phase generator) position
- Playback error rate (MP tape and ME tape)
- Adjustment of the recording current
- R/P error rate (MP tape and ME tape)

2-2-1. Preparation

1. Clean the drum ass'y using alcohol.

Note

- * During cleaning, use sufficient care NOT to damage the heads.
 - * When cleaning is performed using alcohol, let it dry thoroughly before loading a tape.
- If the drum surface is wet, the tape may stick to the drum, leading to tape damage.

2. Connecting the oscilloscope

Connect CH1 of the oscilloscope across TP1 (A-HEAD) or TP2 (B-HEAD) on the R/P AMP PCB and TP12 (GND), and CH2 across TP2 (SWP) on the SERVO PCB and chassis (GND). (See Fig. 2-19, 2-20)

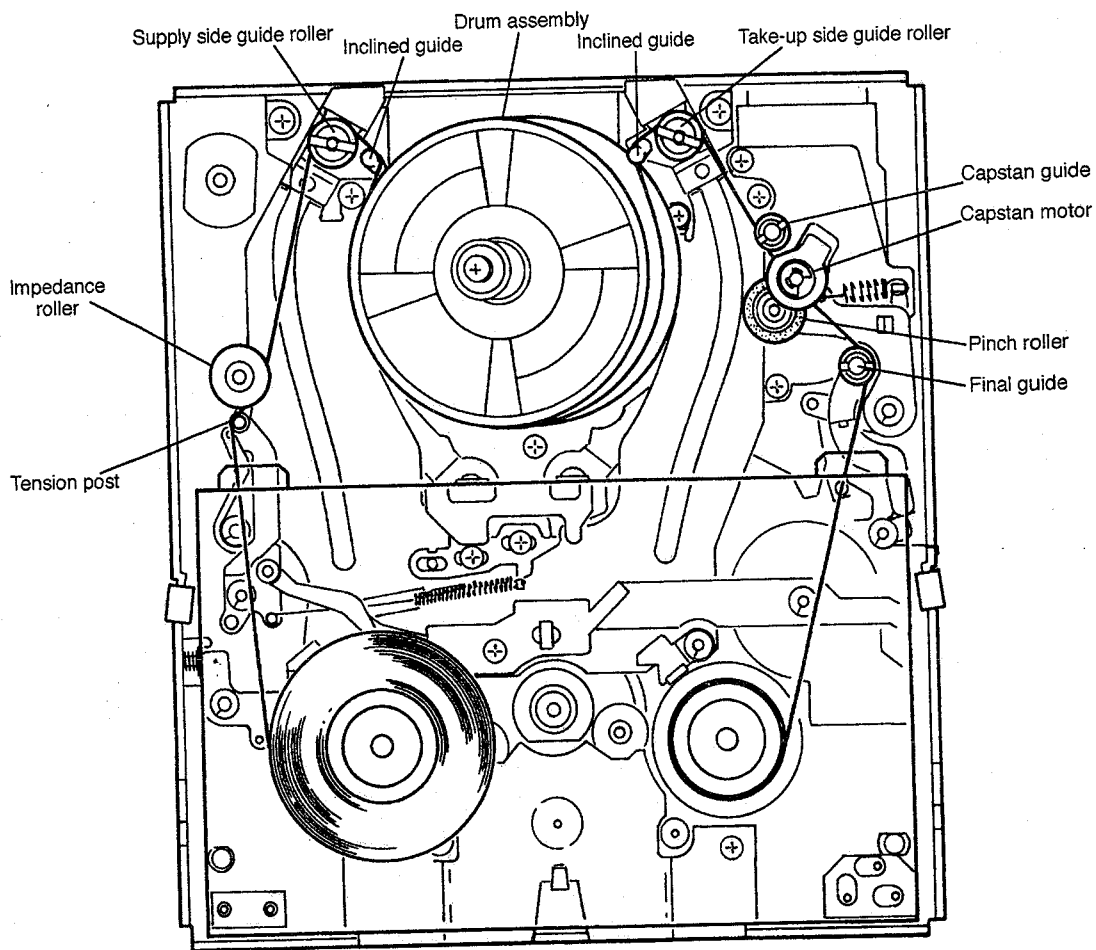


Fig. 2-1

2-2-2. Adjusting the Tension Arm Position and Torque

Equipment and tool

Oscilloscope

Torque cassette (Part No. J-6080-824-A)

Procedure

STEP1. Load a torque cassette (Part No. J-6080-824-A), then set the PCM-800 to PLAY mode.

STEP2. Adjusting the tension arm position

Using a Phillips screwdriver, turn adjust screw A (See Fig. 2-2), then align the center of the semicircular portion of the tension arm to the guide rail edge.

This should fall within range A to C (See Fig. 2-2).

STEP3. Confirming the FWD back tension

1. Read the torque value at the supply-reel (white) side, then confirm that the center value of the torque fluctuations falls within the following range:

Specification: torque value 0.10 to 0.12 N•m
(10 to 12 gf•cm)

Fluctuation range: 0.03 N•m (3 gf•cm) or less

2. If the standard value is not satisfied, remove the torque cassette, loosen screws B (two) in Fig. 2-2 and adjust by moving the protector plate to the left and right. If moved to the left, the torque is reduced, whereas if moved to the right, it increases.
3. Repeat STEPs1 to 3 until the values fall within the standard.

STEP4. Confirming the take-up torque of the take-up reel

1. Read the torque value at the take-up reel (black) side, then confirm that the center value of the torque fluctuations falls within the following range:

Specification: torque value 0.08 to 0.15 N•m
(8 to 15 gf•cm)

Fluctuation value: 0.03 N•m (3 gf•cm) or less

2. If the standard value is not satisfied, remove the torque cassette, replace the take-up reel table (black), and repeat 1 to 4 until the values fall within the specification.

Note

When reinstalling, be sure not to forget to reinstall the cut washer.

STEP5. Confirming the REV take-up torque

1. Press the SHUTTLE switch, then turn the SHUTTLE knob to the left. Read the torque value at the supply-reel (white) side, then confirm that the center value of the torque fluctuations falls within the following range:

Specification: torque value 0.18 to 0.28 N•m
(18 to 28 gf•cm)

Fluctuation range: 0.03 N•m (3 gf•cm) or less

2. If the standard value is not satisfied, remove the torque cassette, replace the supply-reel table (white), and repeat STEPs1 to 5 until the values fall within the specification.

Note

When reinstalling, be sure not to forget to reinstall the cut washer.

3. Read the torque value at the take-up reel (black) side, then confirm that the center value of the torque fluctuations falls within the following range:

Specification: 0.08 to 0.25 N•m (8 to 25 gf•cm)

* Cautions when replacing the reel table

When removing the supply-reel table or take-up reel table, the disk reflector (③ in VIEW-5 on page 6-10) beneath the reel table may also be disengaged as well.

In such a case, see that the polyethylene slider washer (⑤ in VIEW-5) remains on the reel table shaft (mechanism chassis) without fail.

If the disk reflector is affixed over the reel table shaft with the polyethylene slider washer stuck on the backside of the disk reflector, the polyethylene slider washer may NOT fit over the reel table shaft but enter the mechanism chassis.

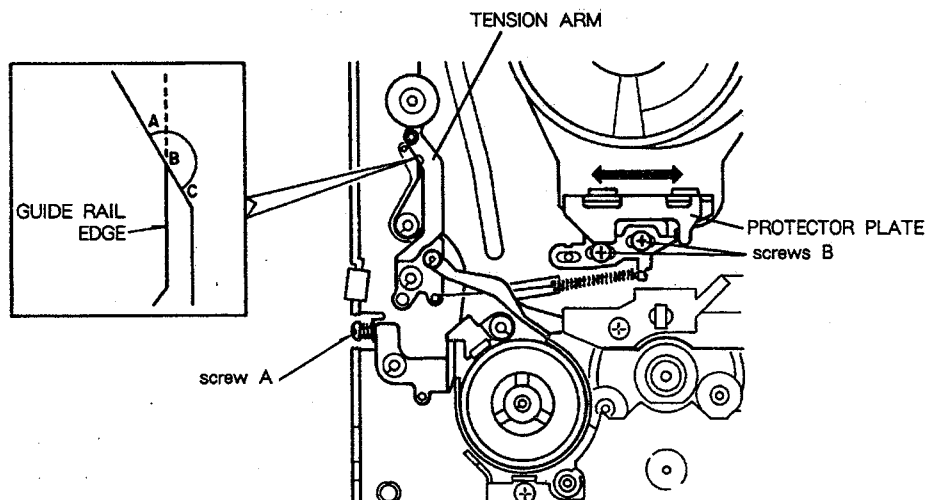


Fig. 2-2

2-2-3. Adjusting the Tape Path

Equipment and tool

Oscilloscope
Torque driver (3 kg)
Torque driver bit M2 (+)
Short connector (Part No. 9-933-369-01)
Tape path driver (Part No. J-6082-026-A)

Test tape

SONY WR5-1NP (Part No. 8-967-795-02)

Procedure

STEP1. Short P3 connector (See Fig. 2-19) (Connect short connector) on the SYSCON PCB.

STEP2. Set the PCM-800 to test mode.

*For how to set test mode, refer to "2-1-2. Mode indication".

STEP3. Load a SONY WR 5-1NP test tape, set the PCM-800 to PLAY mode, and confirm that the tape is free from tape-damaging curl at each guide (four guides: roller guides at the supply side and take-up side of the drum, capstan guide, and final guide). If there is a guide which may damage the tape, take out the test tape immediately, replace it with a blank tape, then adjust the guide height until the tape is free from curl. Next, play back the test tape again and make the following confirmation and adjustment.

Note

When adjusting the height of each roller guide, be sure to slightly loosen the screws securing the guide beforehand.

After adjustment is complete, tighten the screws using a torque driver. Observe a tightening torque of $2\text{N}\cdot\text{m}$ ($200\text{gf}\cdot\text{cm}$)

Torque driver: 3 kg; parts No. J-6325-400-A

(Torque driver bit: M2 (+); parts No. J-6325-380-A)

STEP4. While observing the B-HEAD waveform using the oscilloscope (Note: only the B-HEAD signal is recorded on the SONY WR 5-1NP test tape), fine-adjust the heights of the roller guides at the supply side and take-up side of the drum using a wrench, so that the leading and trailing edges of the RF waveform have virtually the same level as that of the peak portion on the center of the waveform. (See Fig. 2-3)

Note

Be careful not to hold down the roller guide at the supply side too much by way of making the leading edge of the RF waveform flat. Otherwise, it may lead to rounding of the RF waveform during REV mode.

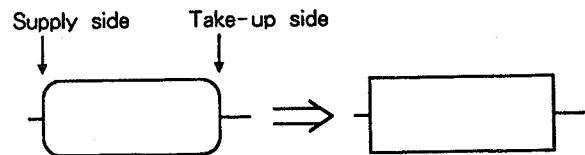


Fig. 2-3

STEP5. So that the tape travels on the lower edge of the capstan guide, adjust the height of the capstan guide.

Notes

*It is acceptable in principle if the tape is confirmed to be free from curl at the lower edge of the guide.

*Prior to adjustment, be sure to dissolve the screw-locking compound applied to the head of the guide.

After the adjustment is complete, reapply screw-locking compound.

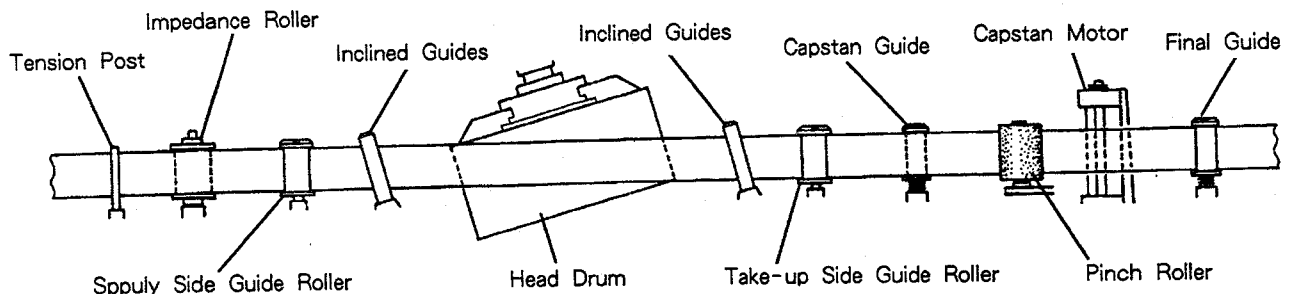


Fig. 2-4

STEP6. Adjust the height of the final guide so that the tape is free from curl between the take-up side of the capstan and the final guide, and that the tape is NOT curled by the upper and lower edges of the final guide.

Notes

* It is acceptable in principle if confirmation is made only.

* Prior to adjustment, be sure to dissolve the screw-locking compound applied to the head of the guide.

After the adjustment is complete, reapply screw-locking compound.

STEP7. Confirming linearity

1. Load a SONY WR 5-1NP test tape, then set the PCM-800 to PLAY mode.

2. Press the DISPLAY key to select "% of pitch change" and change the pitch indication to immediately before the ATF servo is released by pressing the ▼key or ▲key several times.

By changing the pitch indication, the level of the RF waveform will be made smaller.

Note

This operation is in practice not a procedure to vary the tape speed but a procedure to change the ATF servo balance.

3. Confirm that the RF waveform at this point is as flat as possible. If NOT, fine-adjust the roller guides at the supply side and take-up side of the drum.

STEP8. Final checking of each guide

1. Confirm that the upper edge travel regulation is observed for the roller guide at the supply side of the drum.

2. Confirm that the upper edge travel regulation is observed for the roller guide at the take-up side of the drum.

Notes

* Gently push the head of the roller guides at the supply side and the take-up side of the drum in the direction of the rear of the mechanism using a bamboo skewer, then confirm that the waveform in STEP 4 will resume soon (within one second) when the bamboo skewer is released.

If the waveform does NOT quickly resume, upper edge tape travel regulation is roughly made; fine-adjustment is necessary.

* If dirt is adhered to the roller guides, the level will fluctuate while they turn.

In such a case, moisten a cotton swab with alcohol, and clean the roller guides.

3. Confirm the lower edge travel regulation for the capstan guide.

4. Confirm the upper and lower edge travel regulation for the final guide (the tape should be free from curl).

STEP9. After adjustment is complete, release P3 connector (Disconnect the short connector on the SYS PCB, then switch the power OFF once to exit test mode.

2-2-4. Confirming the Playback RF Waveform

Equipment and tool

Oscilloscope

Test tape

TEAC MTT-88101 (MP tape, $F_s = 44.1 \text{ kHz}$)
(Part No. J-6402-070-A)

TEAC MTT-88102 (ME tape, $F_s = 48 \text{ kHz}$)
(Part No. J-6402-080-A)

Procedure

STEP1. Play back an MP playback test tape (TEAC MTT-88101), and confirm that the playback RF waveform for both A-HEAD and B-HEAD falls within the following ranges (See Fig. 2-5):

Note

Use the probe for oscilloscope with 10 : 1.

B, C(minimum level) : 250 mV or more

B/A, C/A : 80% or more

Level fluctuation : 10% or less

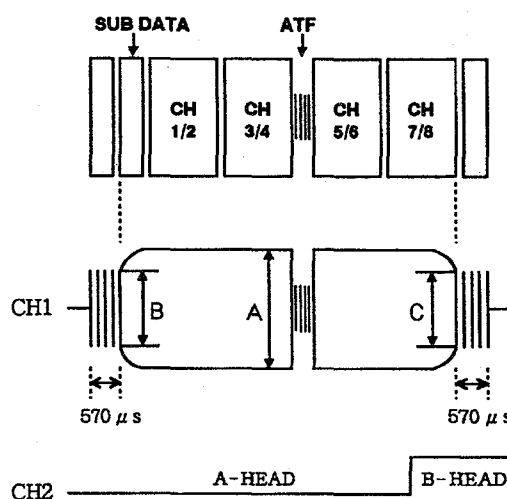


Fig. 2-5

STEP2. Play back an ME playback test tape (TEAC MTT-88102), and confirm in the same way.

2-2-5. Confirming the Recording RF Waveform

Equipment and tool

Oscilloscope

Test tape

- MP unrecorded tape
SONY P6-120HMP1 (NTSC, Hi-8 MP blank tape)
SONY P5-90HMP1 (PAL/SECAM, Hi-8 MP blank tape)
- ME unrecorded tape
SONY E6-120 HME1 (NTSC, Hi-8 ME blank tape)
SONY E5-90 HME1 (PAL/SECAM, Hi-8 ME blank tape)

Procedure

STEP1. Load the MP unrecorded tape, then record silence (no signal).

STEP2. After recording for approx. 15 seconds, rewind and play back the tape; confirm that the recorded RF waveform for both A-HEAD and B-HEAD falls within the following values (See Fig. 2-5):

Note

Use the probe for oscilloscope with 10 : 1.

B, C (minimum level) : 250 mV or more

B/A, C/A : 80% or more

Level fluctuation : 10% or less

STEP3. With an unrecorded ME tape, confirm the same thing.

2-2-6. Confirming the Travel in F.FWD, REW and REV Modes

Equipment and tool

Oscilloscope

Torque driver 3 kg (Part No. J-6325-400-A)

Torque driver bit M2 (+) (Part No. J-6325-380-A)

Test tape

MP playback test tape (or formatted tape)

TEAC MTT-88101 (Part No. J-6402-070-A)

Procedure

STEP1. In all modes, including F.FWD, REW and REV/SHUTTLE, confirm that the tape is free from damage at each guide.

Notes

- * If, in F.FWD mode, the impedance roller generates a strange noise, replace it.
- * If the leading edge of the playback RF waveform is slow to rise up (the waveform gradually increases in level) in 2-5 or the tape curl is excessive during reverse mode, cloose a polyethylene slider washer (beneath the impedance roller) from the following three washers and adjust the height of the impedance roller.
 - 0.13 mm (Part No. 9-933-538-01)
 - 0.20 mm (Part No. 9-933-664-01)
 - 0.25 mm (Part No. 9-933-115-01)
 - No washer

Observe a screw tightening torque of 5 N•m (500 gf•cm)

STEP2. In test mode(Refer to "Mode indication"), load an MP playback test tape (or formatted tape), then confirm the counter indication in F.FWD and REW modes from the beginning to the end of the tape. See that the counter indication is not a continuous bar indication "---". (Momentary bar indication is acceptable.)

In the case of a continuous bar indication, refer to the following:

- ① Fig. 2-6 shows the normal RF waveform (for both A-HEAD and B-HEAD) in F.FWD or REW mode (reel speed:100 times).



Fig. 2-6

- ② Fig. 2-7 shows the RF waveform in which the indication will result in a bar indication in ① mode (the ABS time CANNOT be read due to a missing or distorted waveform).

In such a case, the following measures are required:

- * If the waveform is as in Fig. 2-7 in F.FWD mode, replace the soft brake (⑱ in VIEW-4 on page 6-8) or coil spring (⑳ in VIEW-4) at the supply reel side.
- * If the waveform is as in Fig. 2-7 in REV mode, replace the soft brake (⑱ in VIEW-4 on page 6-8) or coil spring (㉑ in VIEW-4) at the take-up reel side.

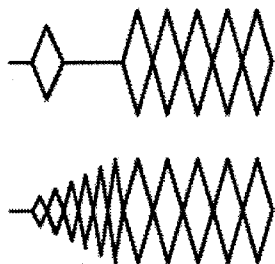


Fig. 2-7

- ③ Fig. 2-8 shows the normal RF waveform in REV mode (capstan feed).



Fig. 2-8

- ④ Fig. 2-9 shows the RF waveform in which the indication will result in a bar indication in ③ mode (the ABS time CANNOT be read due to a missing or distorted waveform).

In such a case, the following causes are conceivable:

- * The roller guide at the supply side of the drum is held down too much. The roller guide needs readjustment.
- * The REV take-up torque at the supply reel pad is low. It should be replaced with a reel table with a REV take-up torque of approx. 0.3 N•m (30 gf•cm)

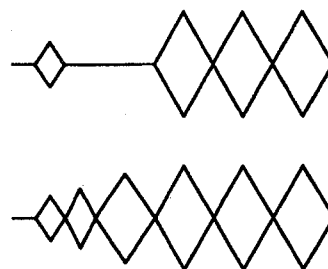


Fig. 2-9

* Cautions when replacing the drum

When the drum is replaced, be sure to confirm and adjust the following items other than tape travel adjustments.

As for adjustment methods, refer to "2-3. Electrical adjustment":

- Adjustment of the P.G. (phase generator) position
- Playback error rate (MP tape and ME tape)
- Adjustment of the recording current
- R/P error rate (MP tape and ME tape)

2-3. Electrical Adjustment

Note

When checking the SYSCON PCB, DSP PCB, A/D PCB, or D/A PCB, connect the EXTENSION PCB (Part No. J-6402-050-A) to each relevant PCB.

2-3-1. Confirming the Power on State

STEP1. Confirming the LED lighting

1. Immediately after the power is switched ON, see that all LEDs are lit.
2. See that all METER LEDs (peak level meters) are lit, and then they go off.

STEP2. Confirming record inhibit

1. See that the REC INHIBIT LED lights when a write-protected tape is loaded.
2. Confirm that recording is NOT possible while the REC INHIBIT LED is lit.

2-3-2. Confirming Each Supply Voltage

1. Confirming supply voltages on the PSY PCB (See Fig. 2-10)

Measure the voltages across each of the following test points and GND using a digital multimeter:

Analog circuitry

- TP1 (P6-6): +12 V (stabilized)
- TP2 (P6-7): GND (for +/-12 V)
- TP3 (P6-8): -12 V (stabilized)
- TP4 (P7-4): +5 V (stabilized)

Digital circuitry

- TP7 (P8-3): +9 V (stabilized)
- TP9 (P11-1): +5 V (stabilized)
- TP8 (P9-4): +13 V (nonstabilized)
- TP10 (P11-2): GND

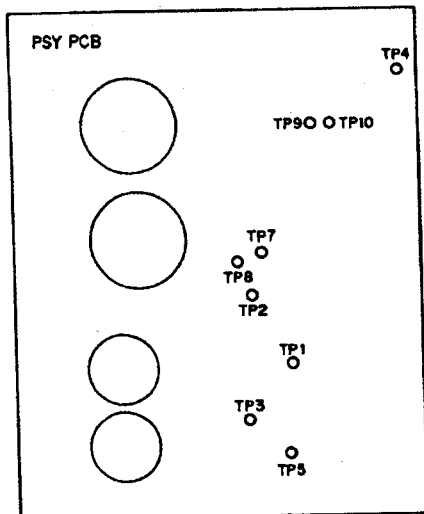


Fig. 2-10

2. Confirming the ± 5 V (stabilized) power supply on the A/D PCB (See Fig. 2-11).

Measure the voltages across each of the following test points and GND using a digital multimeter:

- Pin 3 of U1 (3-pin IC): +5 V (stabilized)
- Pin 3 of U2 (3-pin IC): -5 V (stabilized)
- TP1: GND

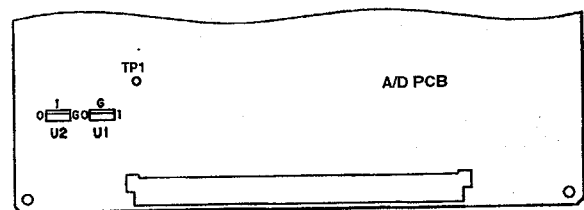


Fig. 2-11

2-3-3. Adjusting the Servo Section

Equipment and tool

Oscilloscope

Test tape

TEAC MTT-88101 (MP tape, $F_s = 44.1$ kHz)
(Part No. J-6402-070-A)
TEAC MTT-88102 (ME tape, $F_s = 48$ kHz)
(Part No. J-6402-080-A)

Procedure

STEP1. Adjusting the position of the P.G. (phase generator)

1. Load a test tape for adjusting the recording position, then set the PCM-800 to PLAY mode.
2. Connect CH1 of the oscilloscope across TP1 and TP12 (GND) on the R/P AMP PCB. (See Fig. 2-20)
3. Connect CH2 of the oscilloscope across TP2 (SWP) on the SERVO PCB and chassis (GND). (See Fig. 2-19)
4. Set the CH1 range of the oscilloscope to 200 mV AC, 50 μ sec and CH2 to 5 V DC (trigger source).
5. So that the time difference between the leading edge of the switching pulse and the envelope edge of the RF output signal is 250 μ sec (See Fig. 2-12), adjust R51 (See Fig. 2-20) on the SERVO PCB.

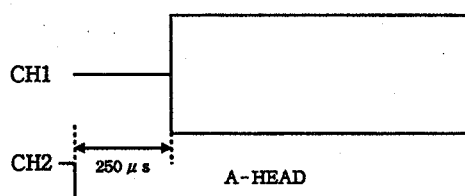


Fig. 2-12

2-3-4. Offset Adjustment in the VCO Free Running Frequency Automatic Compensation Circuit (See "2-3-8. Measurement and Adjustment Parts Location".)

Equipment and tool

Oscilloscope

Short connector (Part No. 9-933-369-01)

Procedure

STEP1. Short TP23 on R/P AMP PCB (Connect short connector to TP23), then set the PCM-800 to PLAY mode.

STEP2. Connect the oscilloscope across TP3 on the R/P AMP PCB and TP12 (GND), then set the oscilloscope range to 1 V DC, 0.5 μ sec.

STEP3. Adjust R101 (A-HEAD) so that the voltage at TP3 is 2.5 V.

STEP4. Similarly, connect the oscilloscope across TP4 on the R/P AMP PCB and TP12 (GND), then adjust R102 (B-HEAD) so that the voltage at TP4 is 2.5 V.

Note

In STEPs 3 and 4, even if a positive-going or negative-going slight glitch is observed as shown in Fig. 2-13, it should be acceptable. However, perform adjustment to alleviate glitches as much as possible.

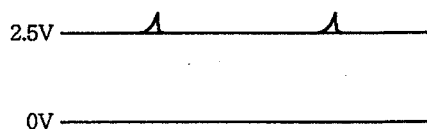


Fig. 2-13

STEP5. After adjustment is complete, release TP23. (Disconnect the short connector for from TP23.)

2-3-5. Confirming and Adjusting the Playback System

Equipment and tool

Oscilloscope

Error rate checker ERC-88 (Part No. J-6402-040-A)

Test tape

TEAC MTT-88101 (MP tape, $F_s = 44.1$ kHz)
(Part No. J-6402-070-A)

TEAC MTT-88102 (ME tape, $F_s = 48$ kHz)
(Part No. J-6402-080-A)

Playback emphasis test tape

Procedure

STEP1. Adjusting the equalizer using an ME tape

1. Load a playback test tape (TEAC MTT-88102, ME tape 1 kHz, full bit), then set the PCM-800 to PLAY mode.
2. Connect the oscilloscope across TP1 (See Fig. 2-20) on the R/P AMP PCB and TP12 (GND), then observe the eye pattern of A-HEAD.
3. Set the oscilloscope range to 100 mV AC, 50 nsec.
4. So that the eye pattern is clear, as shown in Photo-2, adjust R51 (See Fig. 2-19) on the RF AMP PCB.
5. Similarly, connect the oscilloscope across TP2 (See Fig. 2-20) on the R/P AMP PCB and TP12 (GND), then observe the eye pattern of B-HEAD. For adjustment, use R52 (See Fig. 2-19) on the RF AMP PCB.

6. Confirming the error rate

Connect the error rate counter ERC-88 (parts No. J-6402-040-A) to P114 (See Fig. 2-19) on the MOTHER PCB, then play the test tape (TEAC MTT-88102 ME-tape 1 kHz, full bit) to confirm the error rate (for both A-HEAD and B-HEAD).

If the error rate does NOT satisfy the following specification, readjust R51 or R52:

Specification ($F_s = 48$ kHz) :

CH1 to 8 : 2×10^{-2} or less

STEP2. Adjusting the equalizer using an MP tape

1. Load a playback test tape (TEAC MTT-88101, MP tape 1 kHz, full bit), then set the PCM-800 to PLAY mode.
2. In the same way as in 1 (adjusting the equalizer using an ME tape), adjust R53 (A-HEAD) and R54 (B-HEAD) on the RF AMP PCB (See Fig. 2-19).
3. Play the test tape (TEAC MTT-88101, MP tape 1 kHz, full bit), and confirm the error rate in the same way as with an ME tape.
The error rate standard ($F_s = 44.1$ kHz) is the same as with an ME tape.

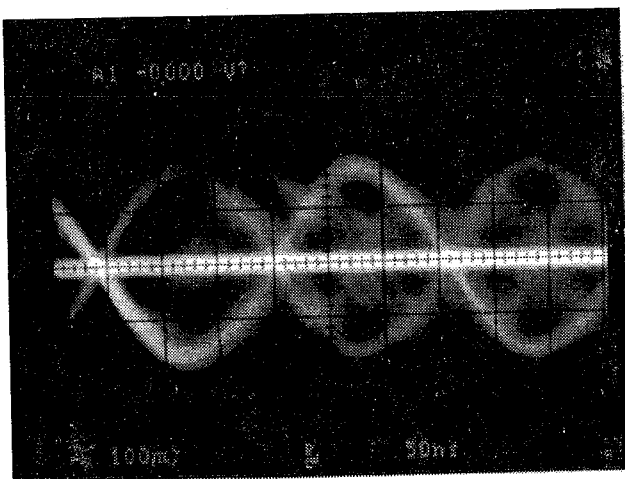


Photo-1. Poor eye pattern (error rate : in the order of 8×10^{-2})

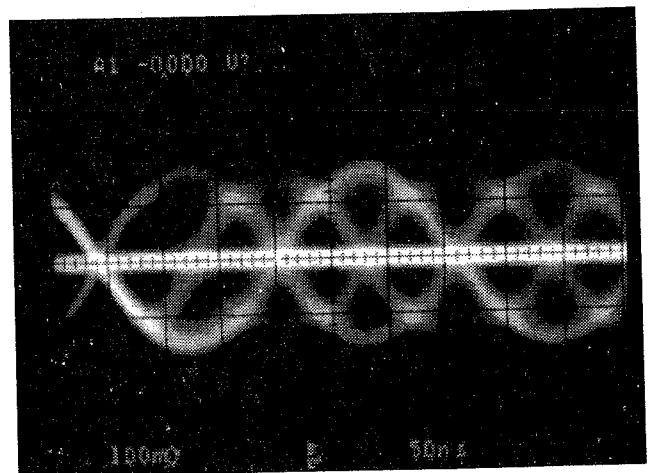


Photo-2. Good eye pattern (error rate : in the order of 0)

STEP3. Confirming the RF level

1. Connect the oscilloscope's CH1 across TP1 (A-HEAD) (See Fig. 2-20) on the R/P AMP PCB and TP12 (GND).
2. Connect the oscilloscope's CH2 across TP2 (SWP) (See Fig. 2-19) on the SERVO PCB and chassis (GND).
3. Load a playback test tape (TEAC MTT-88102, ME tape 1 kHz, full bit), then set the PCM-800 to PLAY mode.
4. Set the oscilloscope's CH1 range to 200 mV AC, 2 msec.
5. Set the oscilloscope's CH2 range to 5 V DC, and (-) trigger.
6. Observe the waveform at TP1 (A-HEAD), and see that the following specification is satisfied. (See Fig. 2-14)
7. Next, set the oscilloscope's CH2 to (+) triggering.
8. Connect the oscilloscope's CH1 across TP2 (B-HEAD) (See Fig. 2-20) on the R/P AMP PCB and TP12(GND), then observe the B-HEAD waveform, see that in A-HEAD the following specification is satisfied:

Note

Use the probe for oscilloscope with 10 : 1.

Specification (See Fig. 2-14):

B, C(minimum): 250 mV or more

B/A, C/A: 80 % or more

STEP4. Playback emphasis characteristics

1. Load a playback emphasis test tape, then set the PCM-800 to PLAY mode.
2. Compare with the 1 kHz reference output, and confirm that other frequencies are within the specification.

Specification :

Fs=48 kHz ; 20 Hz to 20 kHz \pm 1.0 dB

Fs=44.1 kHz ; 20 Hz to 20 kHz \pm 0.8 dB

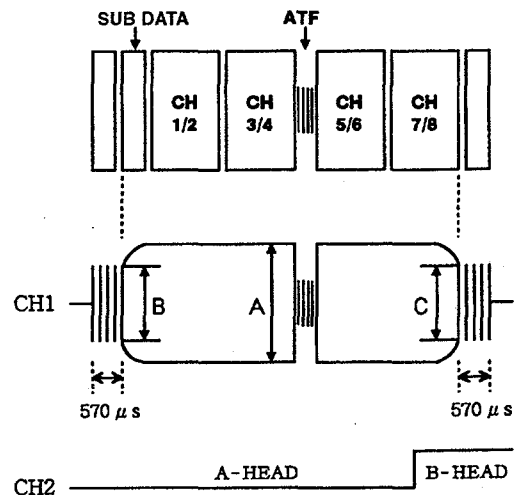


Fig. 2-14

2-3-6. Confirming and Adjusting the Monitor System

Equipment and tool

AF oscillator

Distortion analyzer

Procedure

STEP1. Confirming the specified input

1. Set the ALL INPUT key to ON.
2. Connect the AF oscillator to BALANCED IN and input the signal.
3. So that each channel output from the BALANCED OUT is the specified output (+4 dBm, 0 dBm= 0.775 Vrms), adjust the input level from the AF oscillator and read the value. At this time, the input level should be as follows:

Specification : +4 dBm \pm 0.5 dB (1 kHz)

4. In procedure 3, the level meter reading of the PCM-800 should be -16 dB (The level meter should reach the following LED indication.).

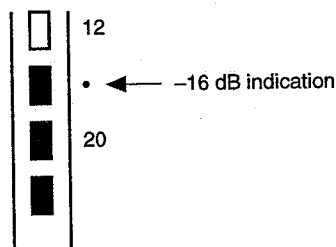


Fig. 2-15

5. Next, when a signal of +15.5 dB higher than the specified level is input, the level meter reading should be 0 dB.

(The level meter should reach the following LED indication)

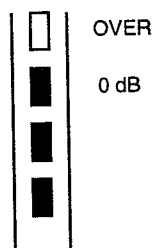


Fig. 2-16

6. When a signal of +16.0 dB higher than the specified level is input, the level meter should reach the "OVER" indication.

STEP2. Confirming the monitor frequency characteristics

1. With the specified level (+4 dBm) signals input/output to and from the BALANCED INPUTS/OUTPUTS, if the input frequency is varied, the following value should be satisfied:

Specification : 20 Hz to 20 kHz \pm 0.5 dB

STEP3. Cross-talk between channels

1. Turn the REC FUNCTION switches of all channels to ON.
2. Input no signal to the channels being measured and input a 1 kHz, specified input + 15.5 dB signal to other channels.
3. Measure the cross-talk (the ratio between the output from the channels being measured and the output from other channels). (1 kHz B.P.F.: IN)

Specification : 90 dB or more (1 kHz)

STEP4. S/N

1. Turn the REC FUNCTION switches of all channels to ON to let no signal be input to any channel. Measure the noise level at this point.
2. The ratio between the noise level and specified output + 15.5 dB should be as follows:

(22 kHz L.P.F., IEC-A: IN)

Specification : 92 dB or more

STEP5. Monitor dynamic range characteristics

1. Hook up as shown in Fig. 2-17. (60 dB flat amp connected, 22 kHz L.P.F., IEC-A: IN)

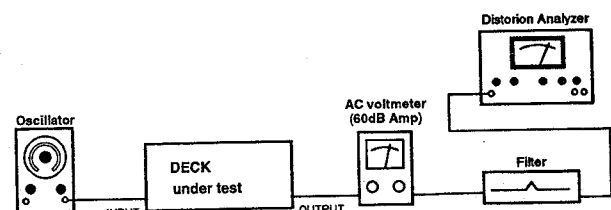


Fig. 2-17

2. Set the ALL INPUT switch to ON.
3. Input a signal 60 dB below the 1 kHz, specified input +15.5 dB level to each INPUT terminal.
4. Measure the distortion factor when the output at this point is boosted by 60 dB using the 60 dB flat amp. (Read in dB indication.)

**Specification: Distortion factor 32 dB or more
(dynamic range 32 dB + 60 dB =
92 dB or more)**

2-3-7. Confirming and Adjusting the Recording System

Equipment and tool

Oscilloscope
Distortion analyzer
REC current kit (Part No. J-6402-060-A)
with Current transformer TEKTRONIX CT-2,
Termination TEKTRONIX 011-0049-01
Error rate checker ERC-88 (Part No. J-6402-040-A)

Test tape

- MP unrecorded tape
SONY P6-120HMP1 (NTSC, Hi-8 MP blank tape)
SONY P5-90HMP1 (PAL/SECAM, Hi-8 MP blank tape)
- ME unrecorded tape
SONY E6-120 HME1 (NTSC, Hi-8 ME blank tape)
SONY E5-90 HME1 (PAL/SECAM, Hi-8 ME blank tape)

Procedure

STEP1. Recording current adjustment

1. Load into the deck a blank ME tape (unrecorded tape) for recording.
2. Disconnect the head connector, then connect as shown in Fig. 2-18.
3. Set the oscilloscope to 10 mV DC, 50 ns.
The state in which shorting pins A and B inserted as shown in Fig. 2-18 is one in which current flowing through the B-HEAD is to be measured.
4. Set the REC FUNCTION switches for all channels to ON, then set the PCM-800 to REC/PLAY mode.

The state with shorting pins A and B reversed in one in which current flowing through the A-HEAD is to be measured.

For a reference waveform using the oscilloscope, refer to Photo-3.

5. So that the current at A-HEAD reads 27 mAp-p (indication is in voltage), adjust R201 (See Fig. 2-20) on the REC/PLAY AMP PCB.
6. Likewise, adjust R202 (See Fig. 2-20) so that the current at B-HEAD (cable extending from P1-2 or P1-3 on the BRUSH PCB) reads 27 mAp-p.
7. Connect the oscilloscope across TP1(A-HEAD) (See Fig. 2-20) on the REC/PLAY AMP PCB and TP12 (GND), then set the range to 200 mV AC, 2 msec.

8. Rewind the tape, then play it back and see that the following value is satisfied:

Specification : R/P level 250 mV or more

9. Likewise, measure TP2 (B-HEAD) (See Fig. 2-20) on the REC/PLAY AMP PCB.

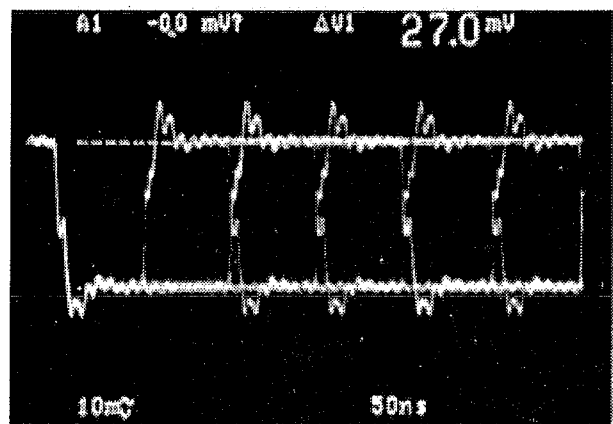
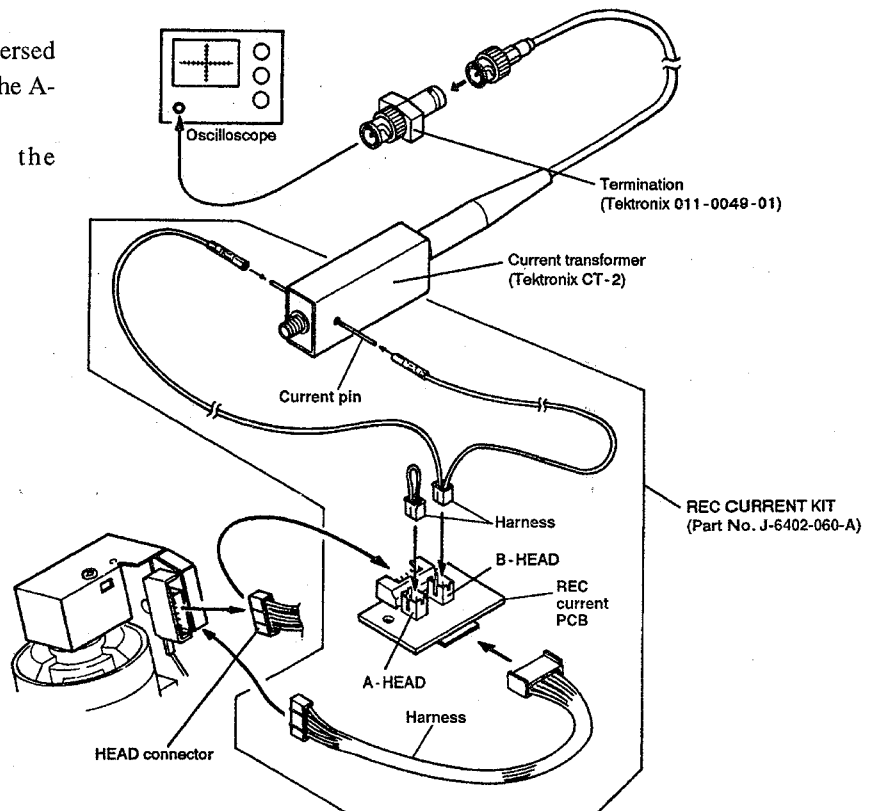


Photo-3

Fig. 2-18



STEP2. REC/PLAY distortion factor

1. Connect the distortion analyzer to BALANCED OUT (22 kHz, L.P.F., IEC-A: IN).
2. Load a blank ME tape for recording (unrecorded tape), then format it with $F_s=48$ kHz.
3. Press the MEMO 1 key to store the recording start point, then record a 1 kHz, specified input + 15.5 dB signal.
4. The moment recording is complete, press the MEMO 2 key.
5. When the recorded portion is played back using the REPEAT key, the distortion factor should satisfy the following specification.
6. Perform similar measurement for 10 kHz, and see if the following values are satisfied:

Specification : 1 kHz 0.006% or less
10 kHz 0.009% or less

STEP3. Error rate using an ME tape (record and playback)

1. Connect the error rate counter ERC-88 (Parts No. J-6402-040-A) to connector P114 (See Fig. 2-19) on the MOTHER PCB.
2. Load a fresh or sufficiently demagnetized ME tape, and format it at $F_s=48$ kHz.
3. Set the REC FUNCTION switches for all channels to ON, then press the MEMO 1 key to store the recording start point.
4. Record the 1 kHz specified input level signal to all channels.
5. The moment recording is complete, press the MEMO 2 key.
6. Set the REC FUNCTION switches for all channels to OFF, then press the REPEAT key to play them back.
7. The error rate at this point should satisfy the following values:

Specification :
A-HEAD CH3/4= 3×10^{-2} or less
The other channels= 2×10^{-2} or less

STEP4. Error rate using an MP tape (record and playback)
Using the same method as in STEP3, confirm the error rate. The standard values are also the same as with an ME tape.

STEP5. Error rate using an ME tape (overwrite)

1. After STEP3, overwrite the 1 kHz specified input level signal from MEMO 1 point to MEMO 2 point to all channels.
2. Play back the overwritten portion using the REPEAT key.
3. The error rate at this point should satisfy the following values:

Specification :

A-HEAD CH3/4= 3×10^{-2} or less
The other channels= 2×10^{-2} or less

STEP6. Error rate using an MP tape (overwrite)

Using the same method as in STEP5, confirm the error rate at the portion overwritten in STEP4. The standard values are also the same as with an ME tape.

2-3-8. Measurement and Adjustment Parts Location

—Top view—

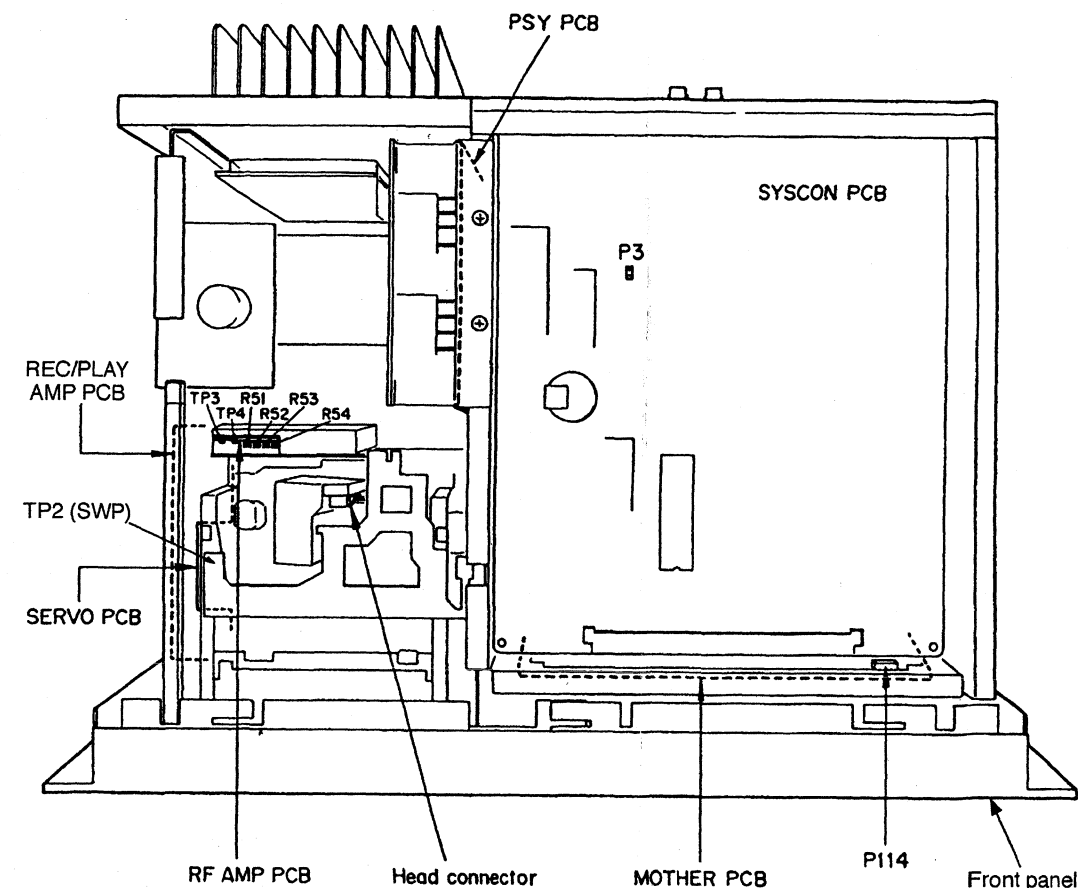


Fig. 2-19

—Side view—

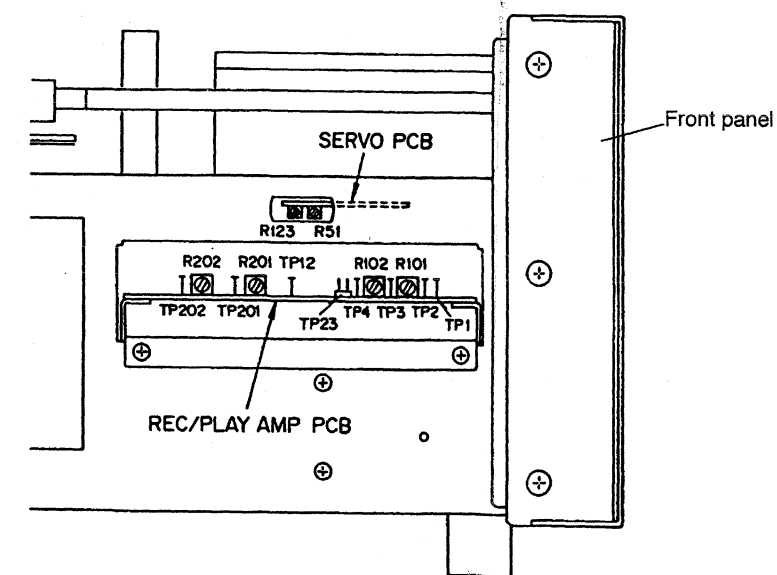
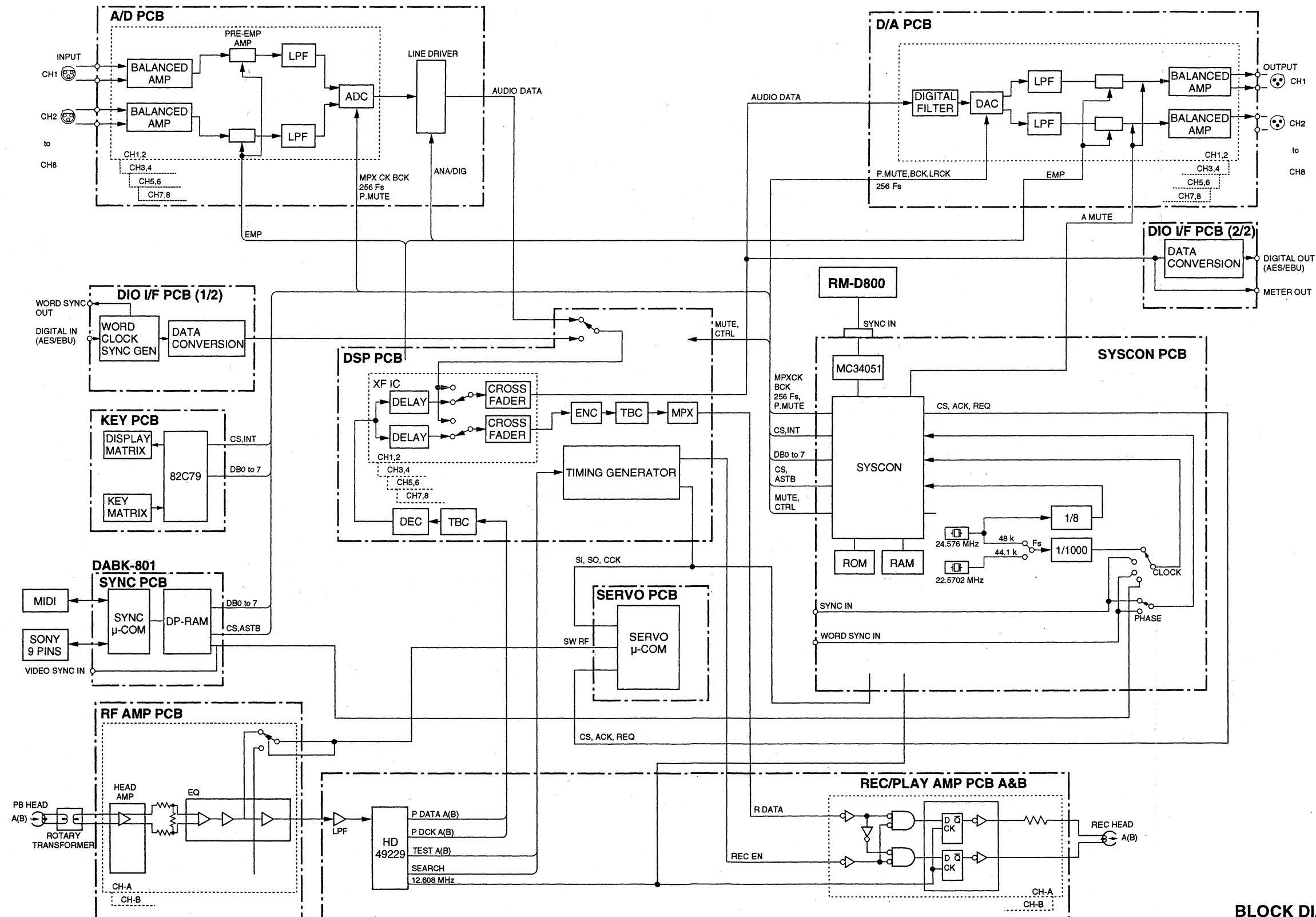


Fig. 2-20

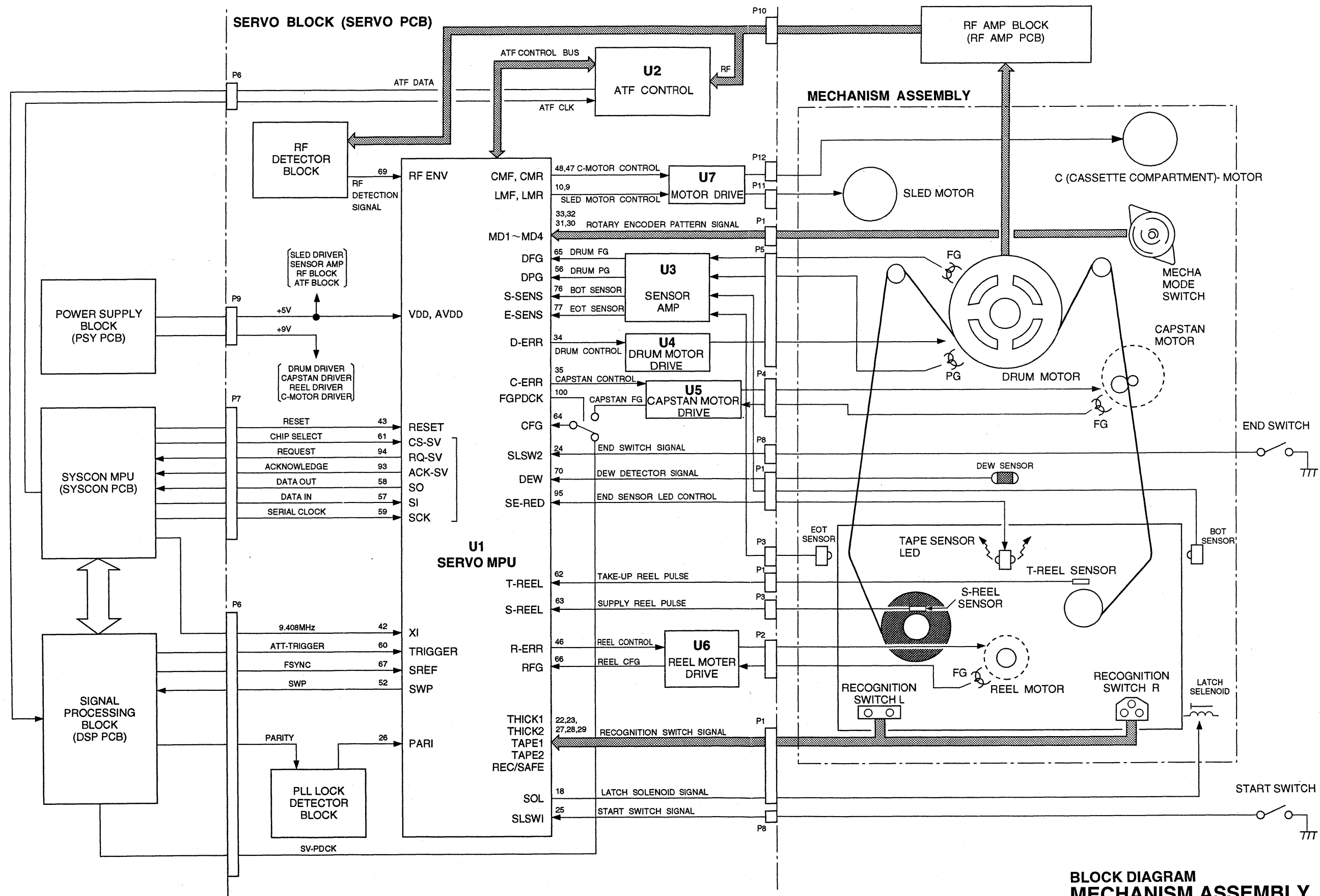
Section 3 Block Diagrams

Block Diagram PCM-800 Overall

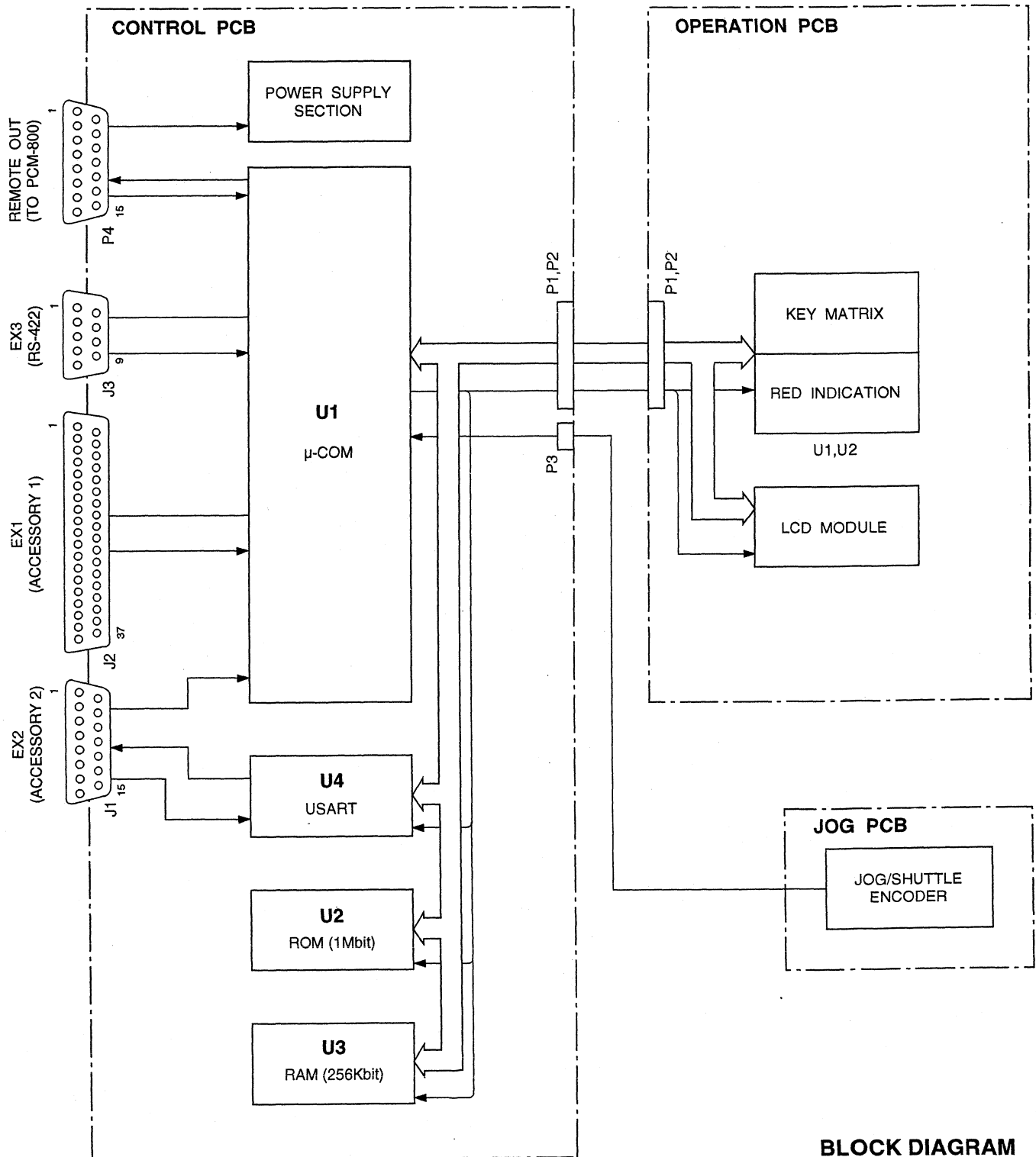


**BLOCK DIAGRAM
OVERALL**
PCM-800

Block Diagram PCM-800 Mechanism Assembly

BLOCK DIAGRAM
MECHANISM ASSEMBLY
PCM-800

Block Diagram RM-D800 Overall



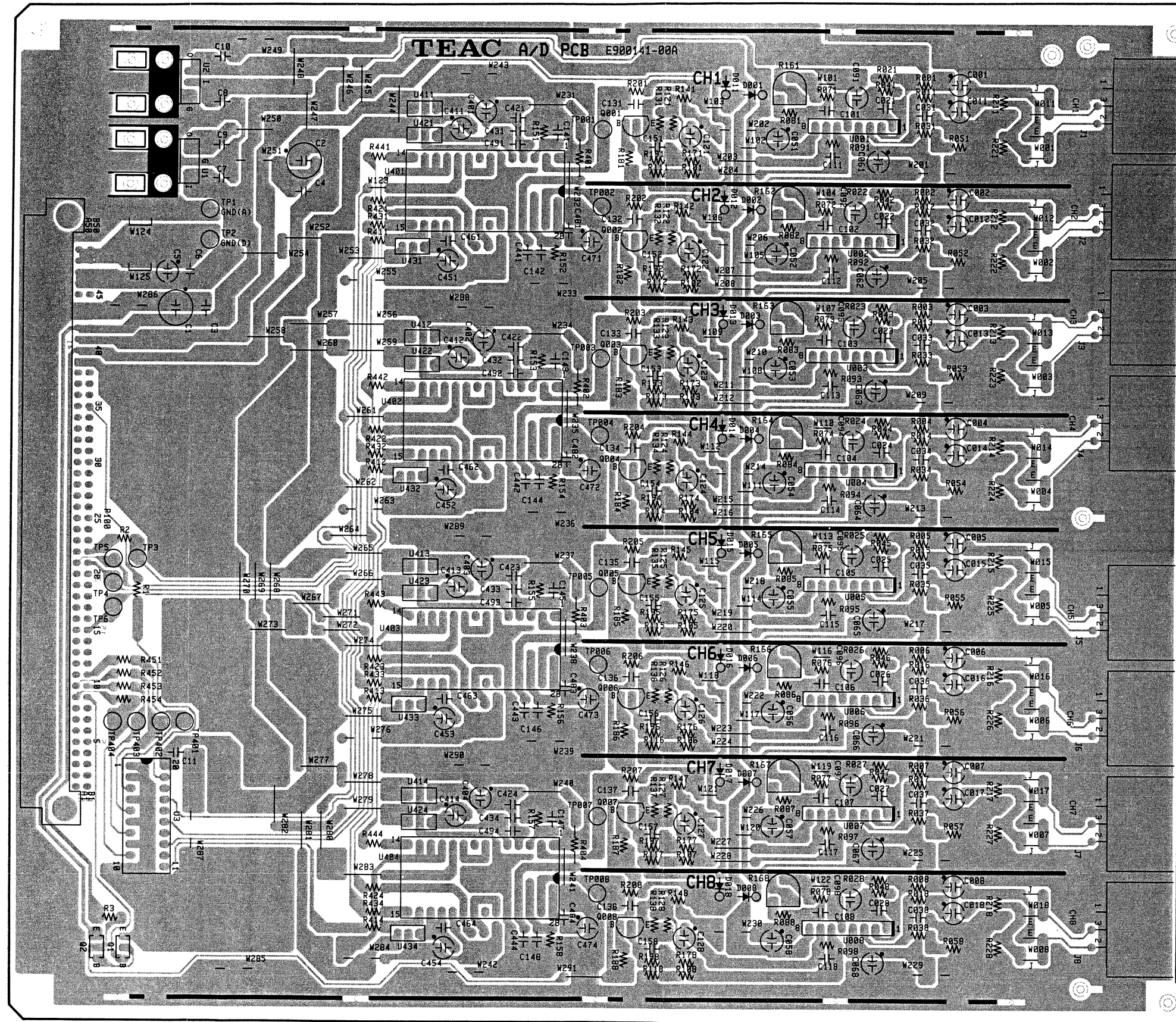
BLOCK DIAGRAM
OVERALL
RM-D800

Section 4

Board Layouts

Model Name	Board Name	Function	Page
4-1. PCM-800	A/D PCB	Analog to Digital Converter Board	4-2
	D/A PCB	Digital to Analog Converter Board	4-4
	DSP PCB	Digital Signal Processing Board	4-6
	DIO-IF PCB	Digital Input/Output Interface Board	4-8
	SYSICON PCB	System Control Board	4-10
	KEY PCB	Key Board	4-12
	COUNTER PCB	Counter Board	4-12
	METER PCB	Meter Board	4-12
	REC/PLAY AMP PCB	REC/PLAY Amplifier Board	4-14
	RF AMP PCB	RF Amplifier Board	4-14
	SERVO PCB	Servo Board	4-14
	FILTER PCB	Filter Board	4-14
	FUSE PCB	Fuse Board	4-14
	PSY PCB	Power Supply Board	4-16
	TR PCB	Transistor Board	4-16
	IC PCB	IC Board	4-16
	MOTHER PCB	Mother Board	4-16
4-2. RM-D800	OPERATION PCB	Operation Board	4-18
	CONTROL PCB	Control Board	4-20
	JOG PCB	Jog Board	4-20
	V-REG PCB	Voltage Regulator Board	4-20
4-3. DABK-801	SYNC PCB	Sync Board	4-22

4-1. PCM-800
A/D PCB
Component side

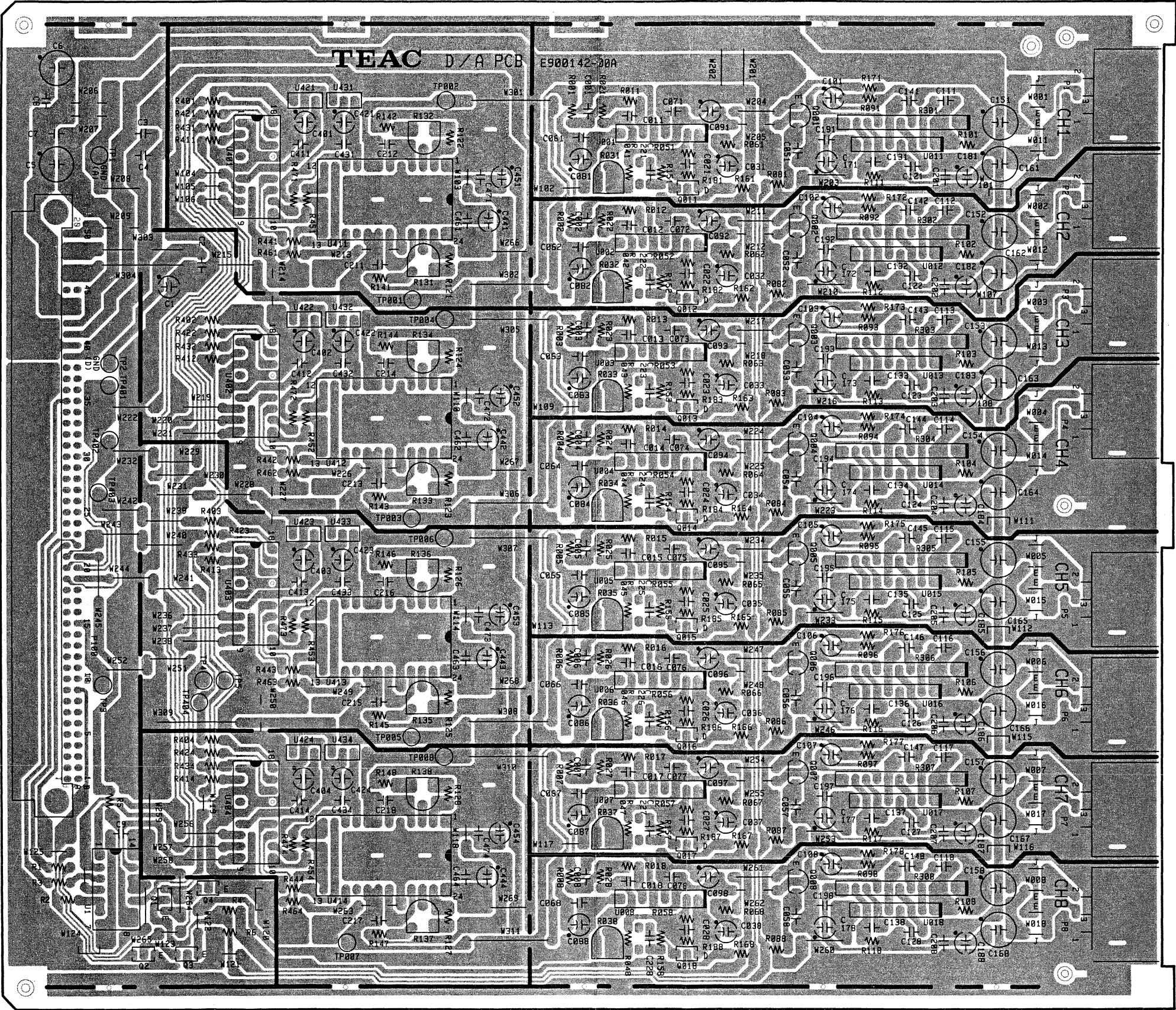


E900141-00A

■ Solder side pattern

D/A PCB
Component side

D/A PCB PCM-800	D/A PCB PCM-800
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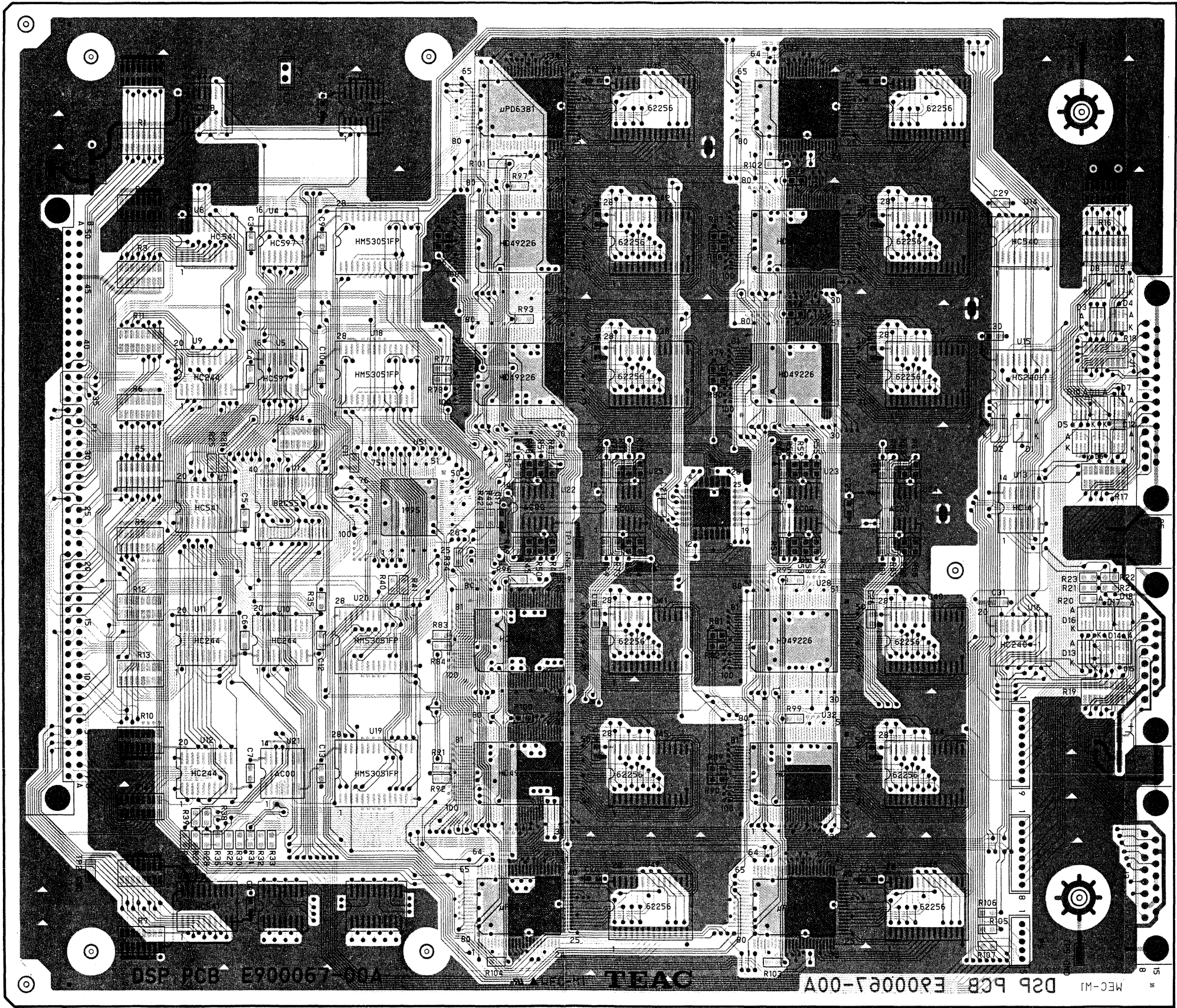


E900142-00A
Solder side pattern

DSP PCB
Component side

DSP PCB
PCM-800

DSP PCB
PCM-800



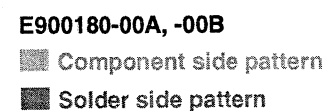
E900067-00A

■ Component side pattern

■ Solder side pattern

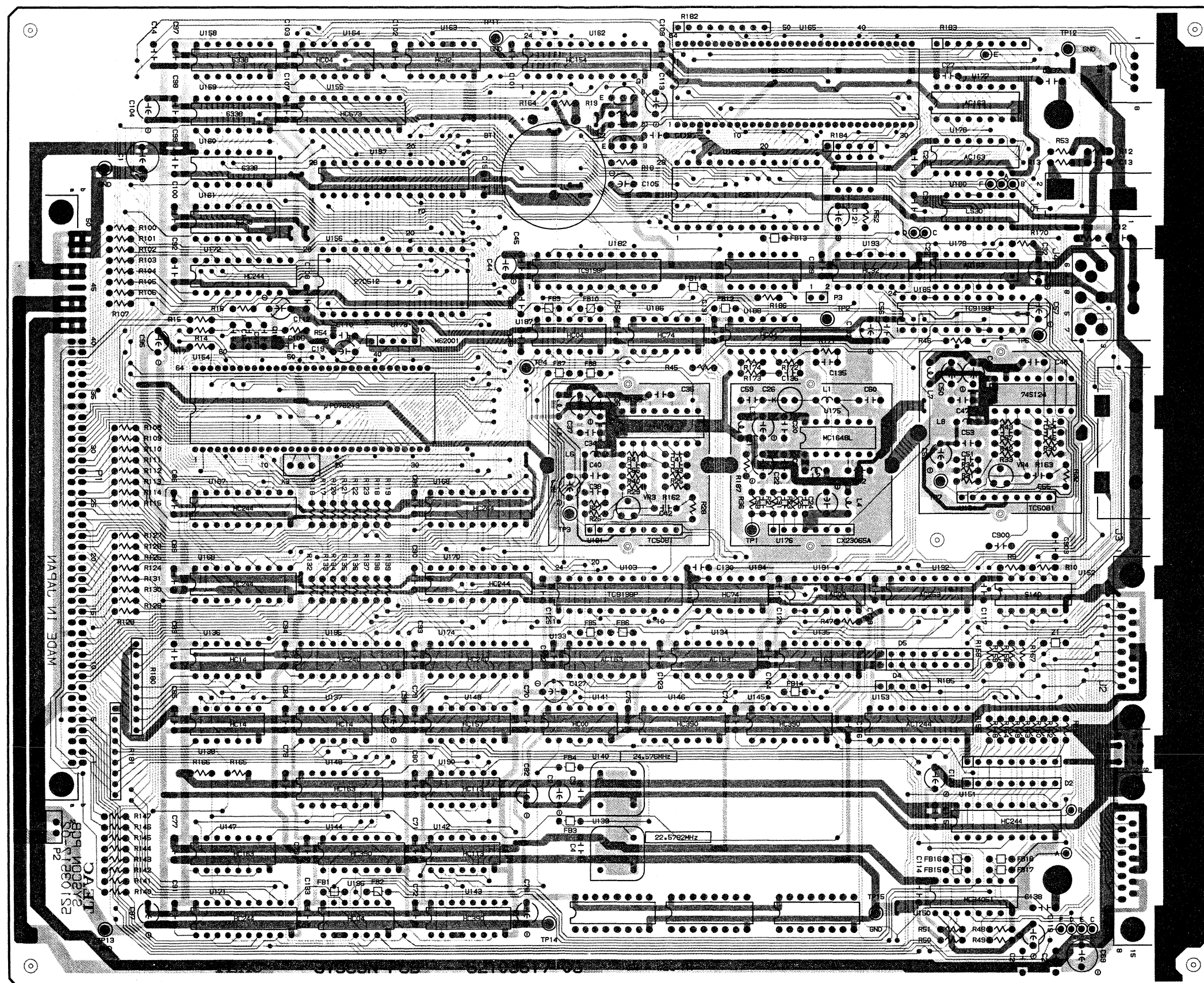
Component side

DIO-IF PCB
PCM-800



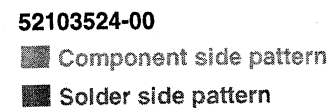
Component side

SYSCON PCB
PCM-800

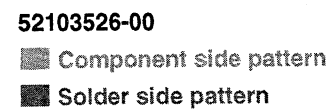


■ Component side pattern
■ Solder side pattern

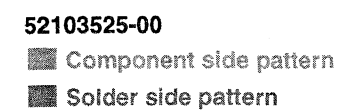
Component side



Component side

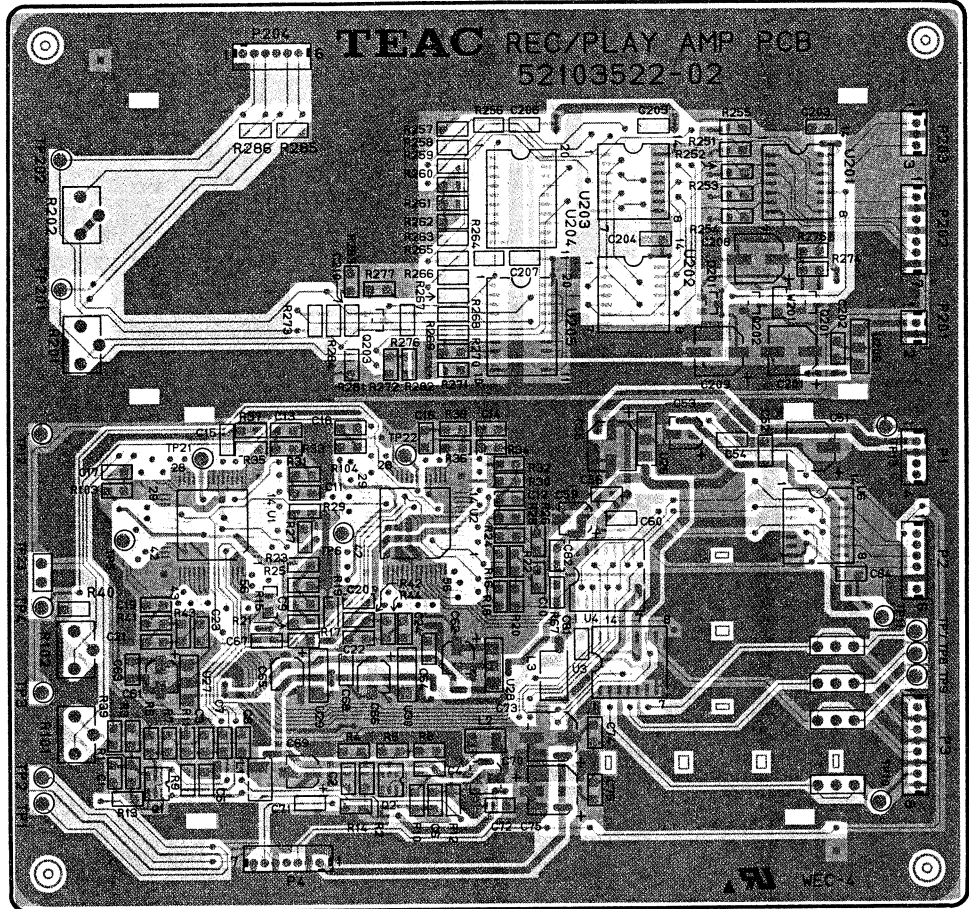


Component side



REC/PLAY AMP PCB

Component side

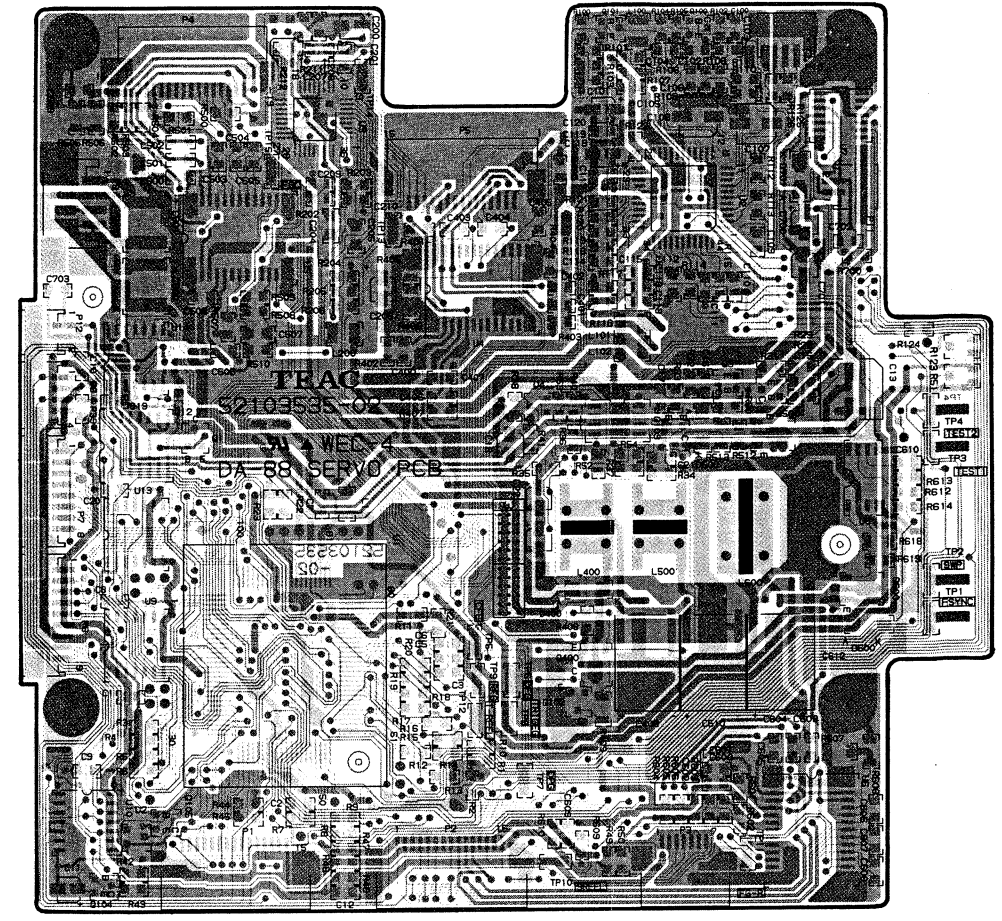


52103522-02

- Component side pattern
- Solder side pattern

SERVO PCB

Component side

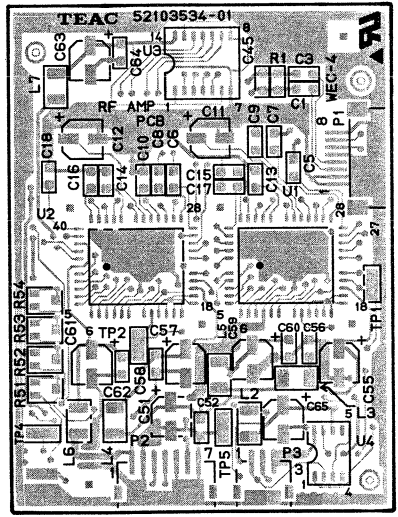


52103535-02

- Component side pattern
- Solder side pattern

RF AMP PCB

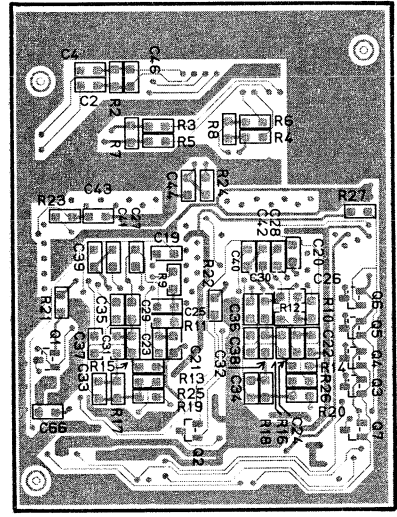
Component side



52103534-01

- Component side pattern

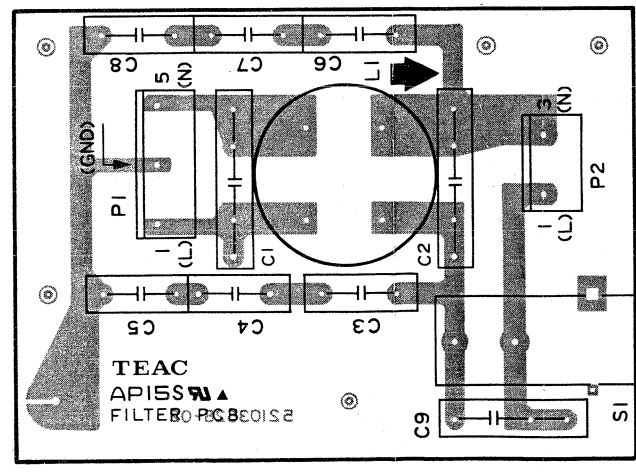
Soldering side



- Solder side pattern

FILTER PCB

Component side

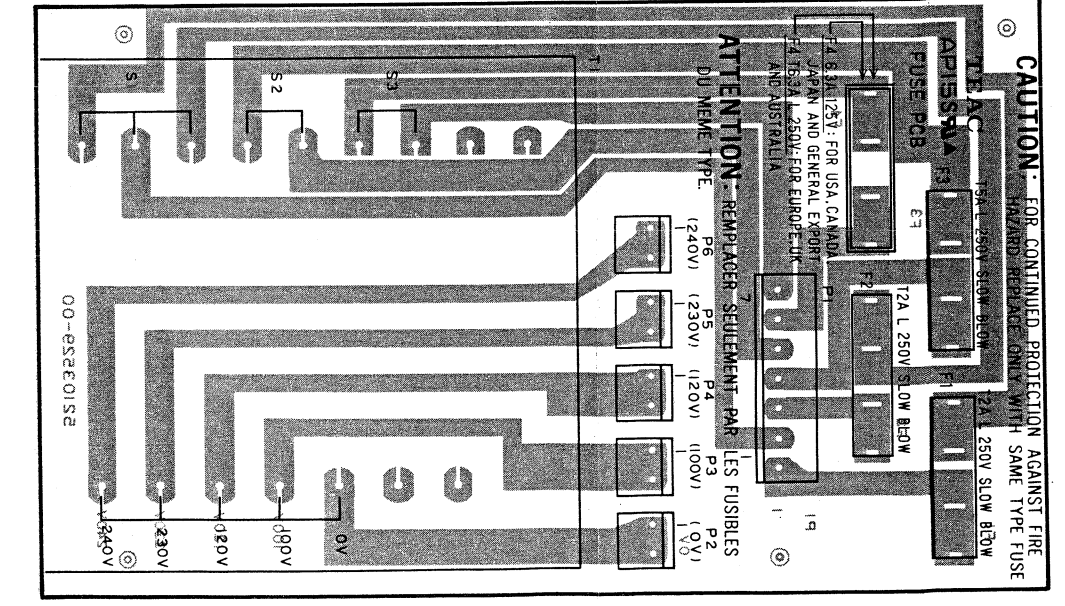


52103528-01

- Solder side pattern

FUSE PCB

Component side

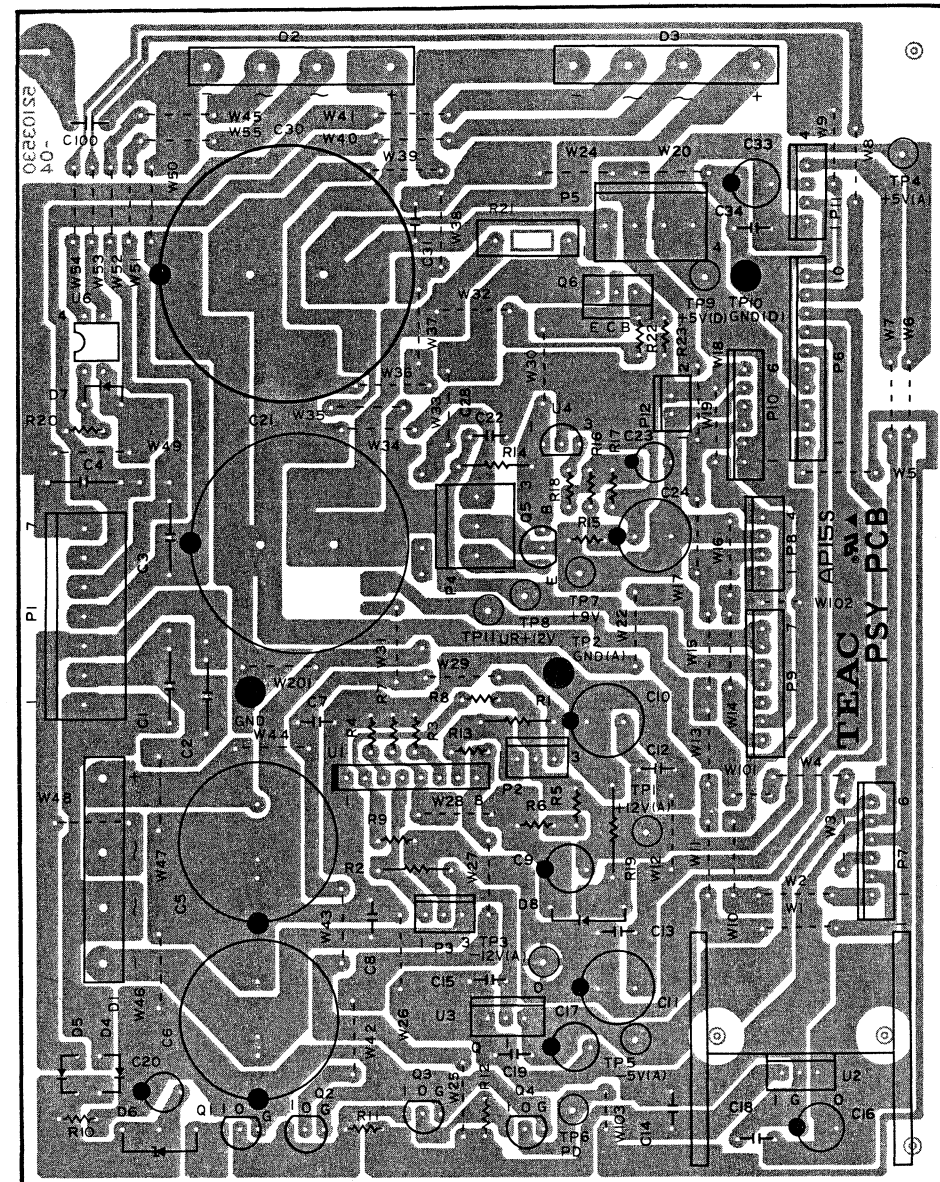


52103529-00

- Solder side pattern

PSY PCB

Component side

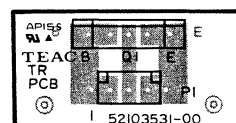


52103530-04

■ Solder side pattern

TR PCB

Component side

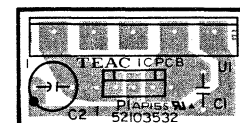


52103531-00

■ Solder side pattern

IC PCB

Component side

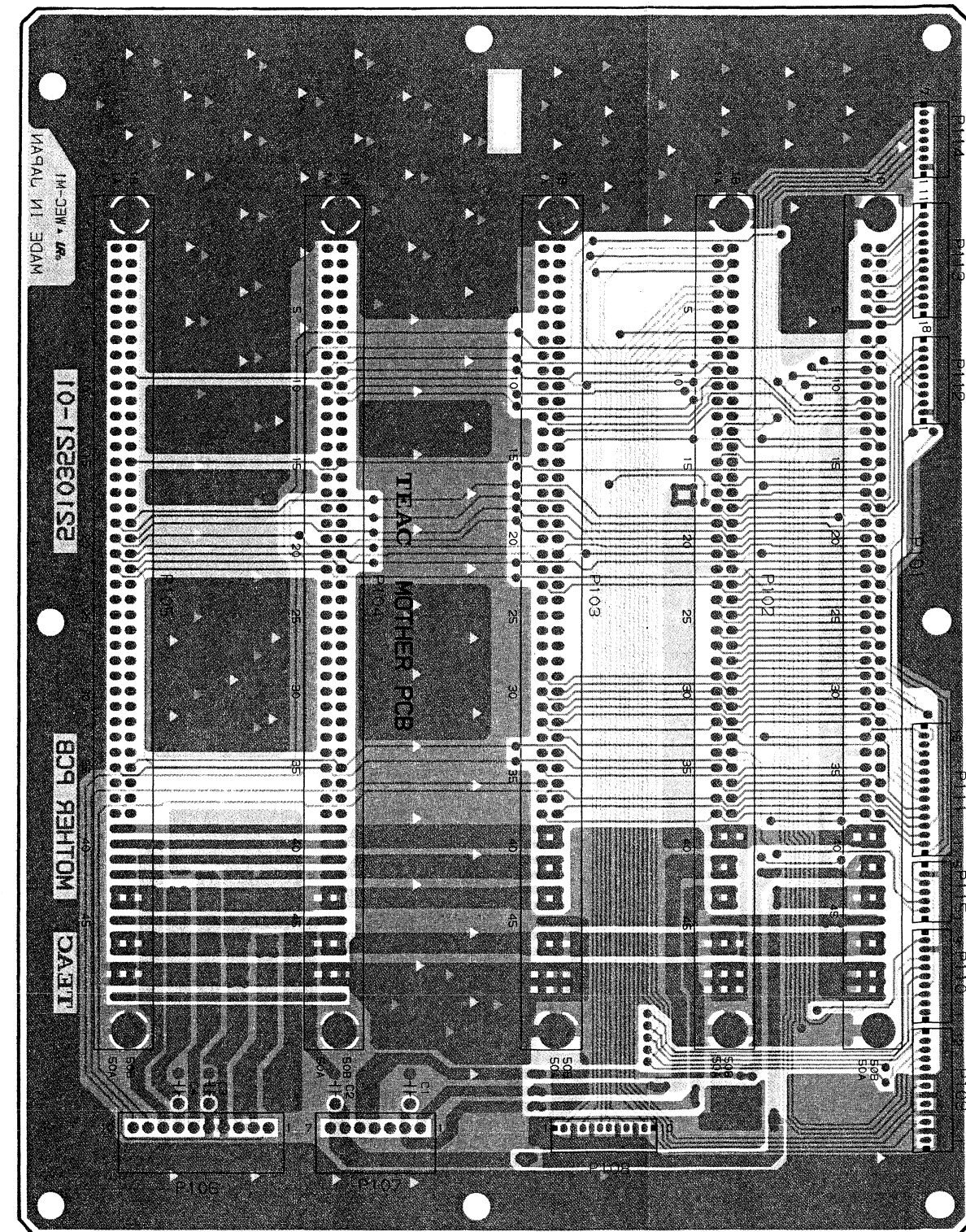


52103532-00

■ Solder side pattern

MOTHER PCB

Component side

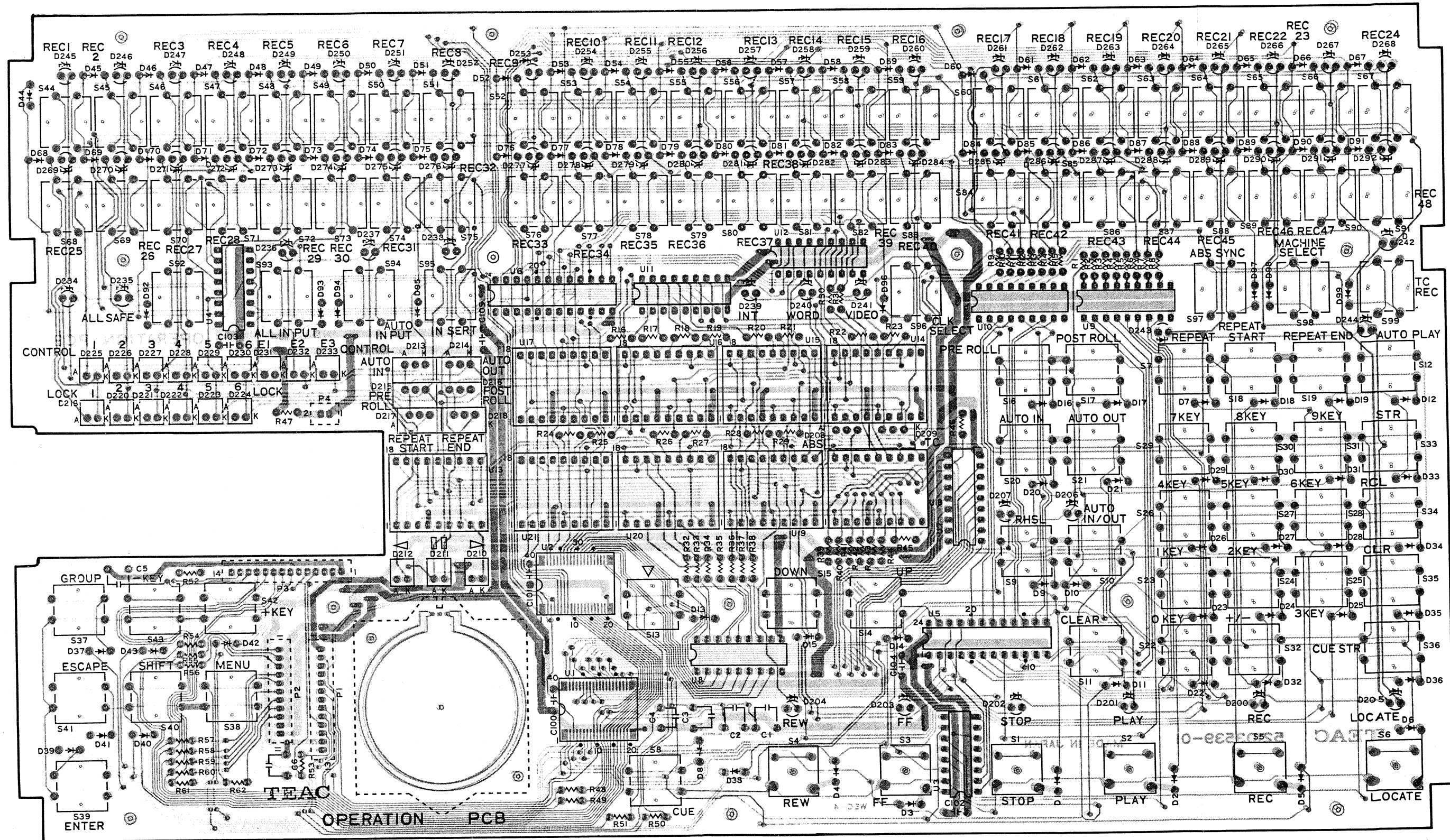


52103521-01

■ Component side pattern
■ Solder side pattern

4-2. RM-D800 OPERATION PCB

Component side

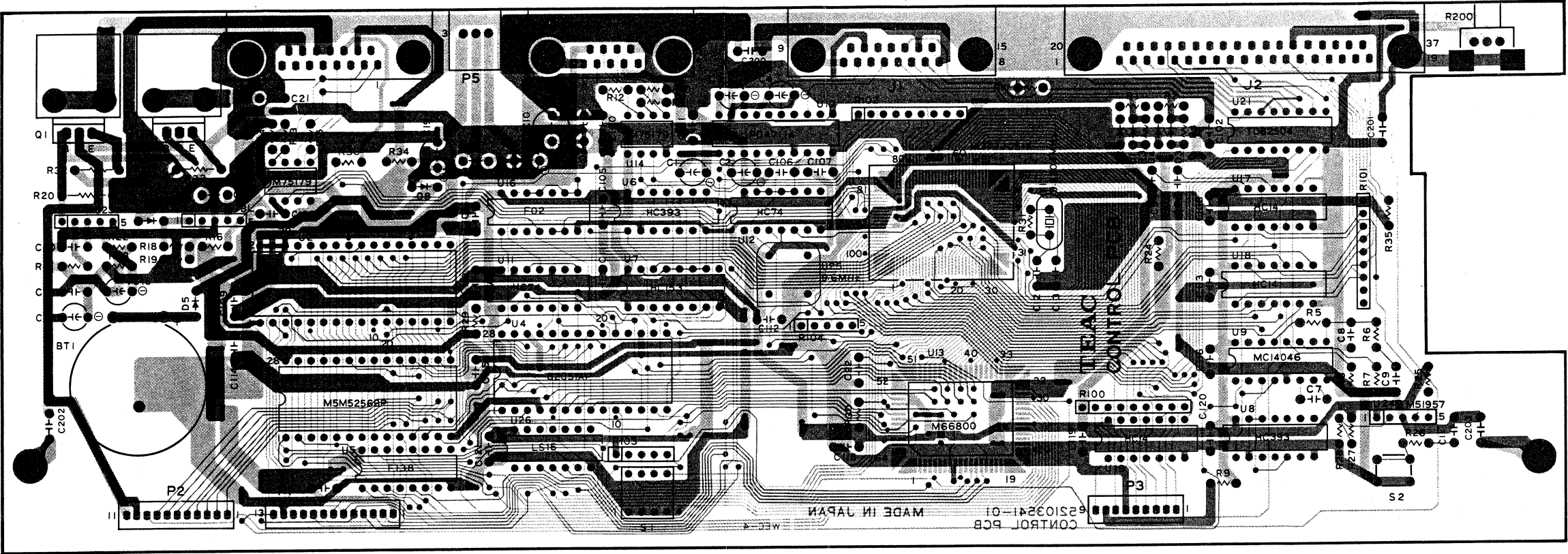


52103539-01

- Component side pattern
- Solder side pattern

CONTROL PCB

Component side



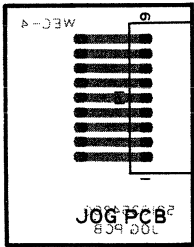
52103541-01

■ Component side pattern

■ Solder side pattern

JOG PCB

Component side



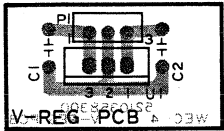
52003542-00

■ Component side pattern

■ Solder side pattern

V-REG PCB

Component side



52103583-00

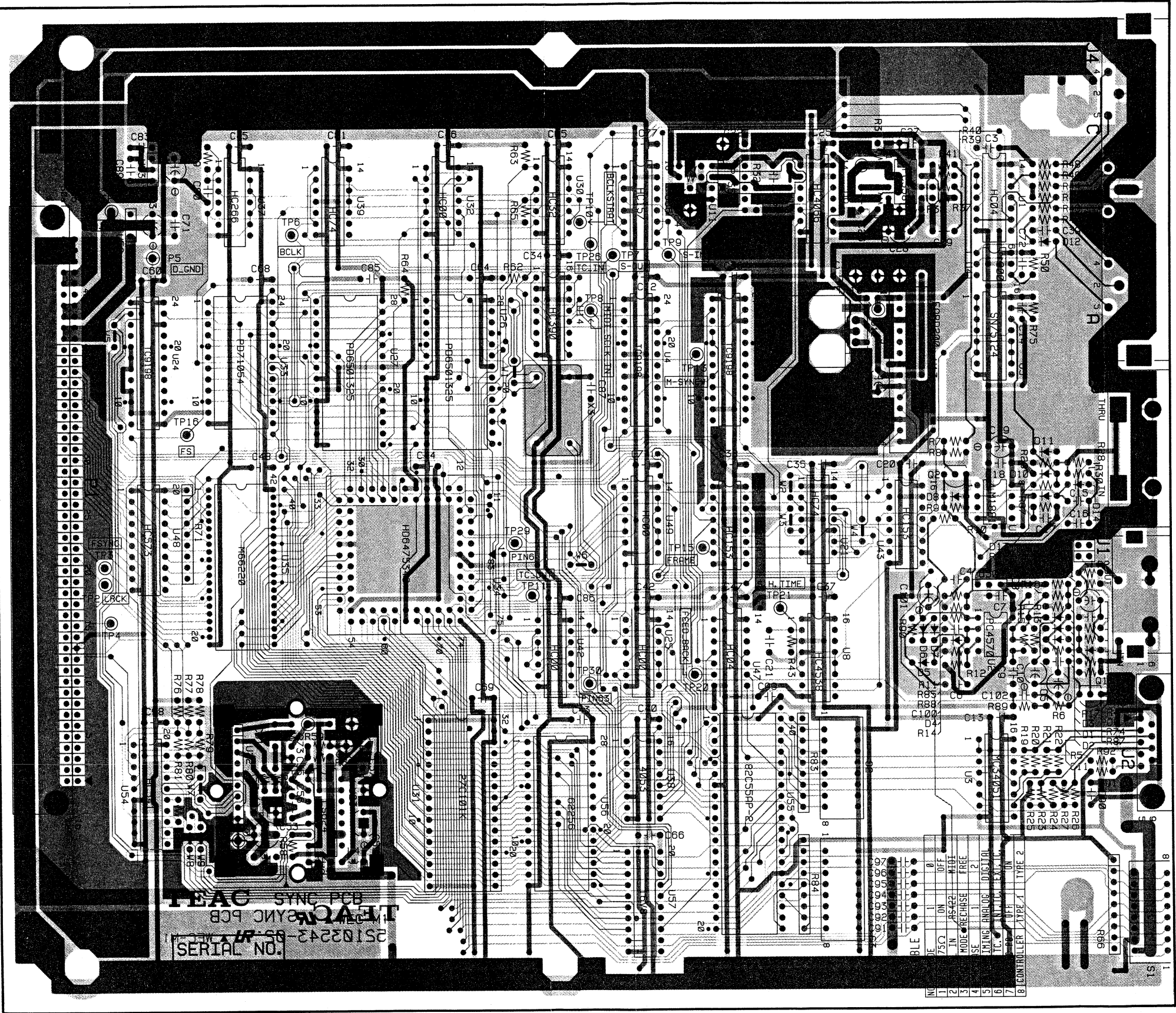
■ Component side pattern

■ Solder side pattern

4-3. DABK-801

SYNC PCB

Component side



52103543-02

Component side pattern

Solder side pattern

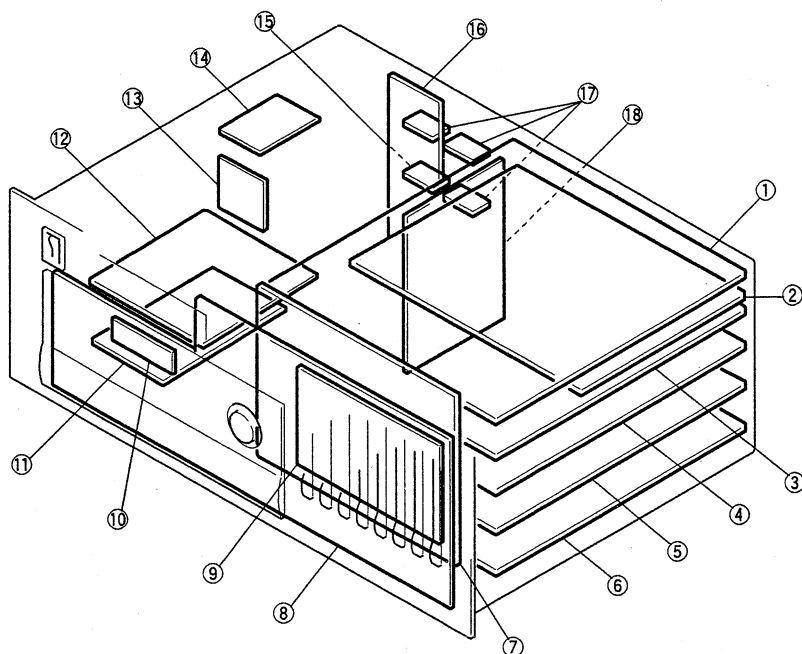
Section 5

Schematic Diagrams

Model Name	Board Name	Function	Page
5-1. PCM-800	A/D PCB	Analog to Digital Converter Board	5-3
	D/A PCB	Digital to Analog Converter Board	5-5
	DSP PCB	Digital Signal Processing Board	5-7
	DIO-IF PCB	Digital Input/Output Interface Board	5-11
	SYSCON PCB	System Control Board	5-17
	KEY PCB	Key Board	5-21
	COUNTER PCB	Counter Board	5-21
	METER PCB	Meter Board	5-23
	REC/PLAY AMP PCB	REC/PLAY Amplifier Board	5-25
	RF AMP PCB	RF Amplifier Board	5-27
	SERVO PCB	Servo Board	5-29
	FILTER PCB	Filter Board	5-31
	FUSE PCB	Fuse Board	5-31
	PSY PCB	Power Supply Board	5-31
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5-2. RM-D800	OPERATION PCB	Operation Board	5-39
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	JOG PCB	Jog Board	5-41
	V-REG PCB	Voltage Regulator Board	5-41
5-3. DABK-801	SYNC PCB	Sync Board	5-43

Board Location

PCM-800



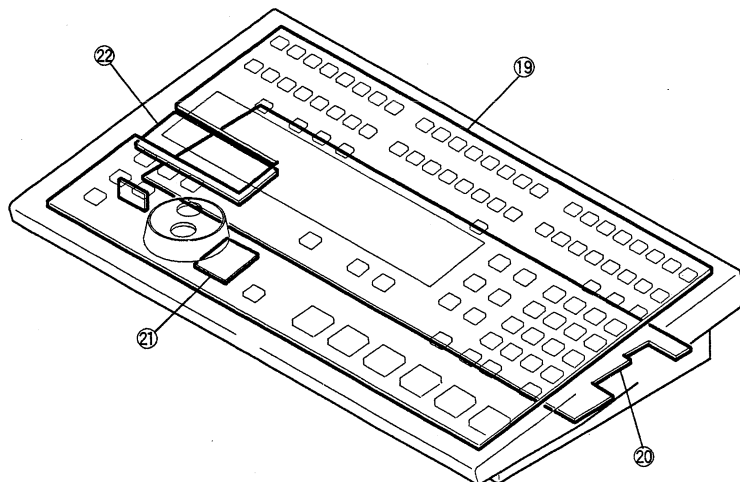
- ① SYSCON PCB : System Control Board
- ② DIO IF PCB : Digital Input/Output Interface Board
- ③ DSP PCB : Digital Signal Processing Board
- ⑤ A/D PCB : Analog to Digital Converter Board
- ⑥ D/A PCB : Digital to Analog Converter Board
- ⑦ MOTHER PCB : Mother Board
- ⑧ KEY PCB : Key Board
- ⑨ METER PCB : Meter Board
- ⑩ COUNTER PCB : Counter Board

- ⑪ REC/PLAY AMP PCB : REC/PLAY Amplifier Board
- ⑫ SERVO PCB : Servo Board
- ⑬ RF AMP PCB : RF Amplifier Board
- ⑭ FILTER PCB : Filter Board
- ⑮ IC PCB : IC Board
- ⑯ FUSE PCB : Fuse Board
- ⑰ TR PCB : Transistor Board
- ⑱ PSY PCB : Power Supply Board

DABK-801

- ④ SYNC PCB : Sync Board

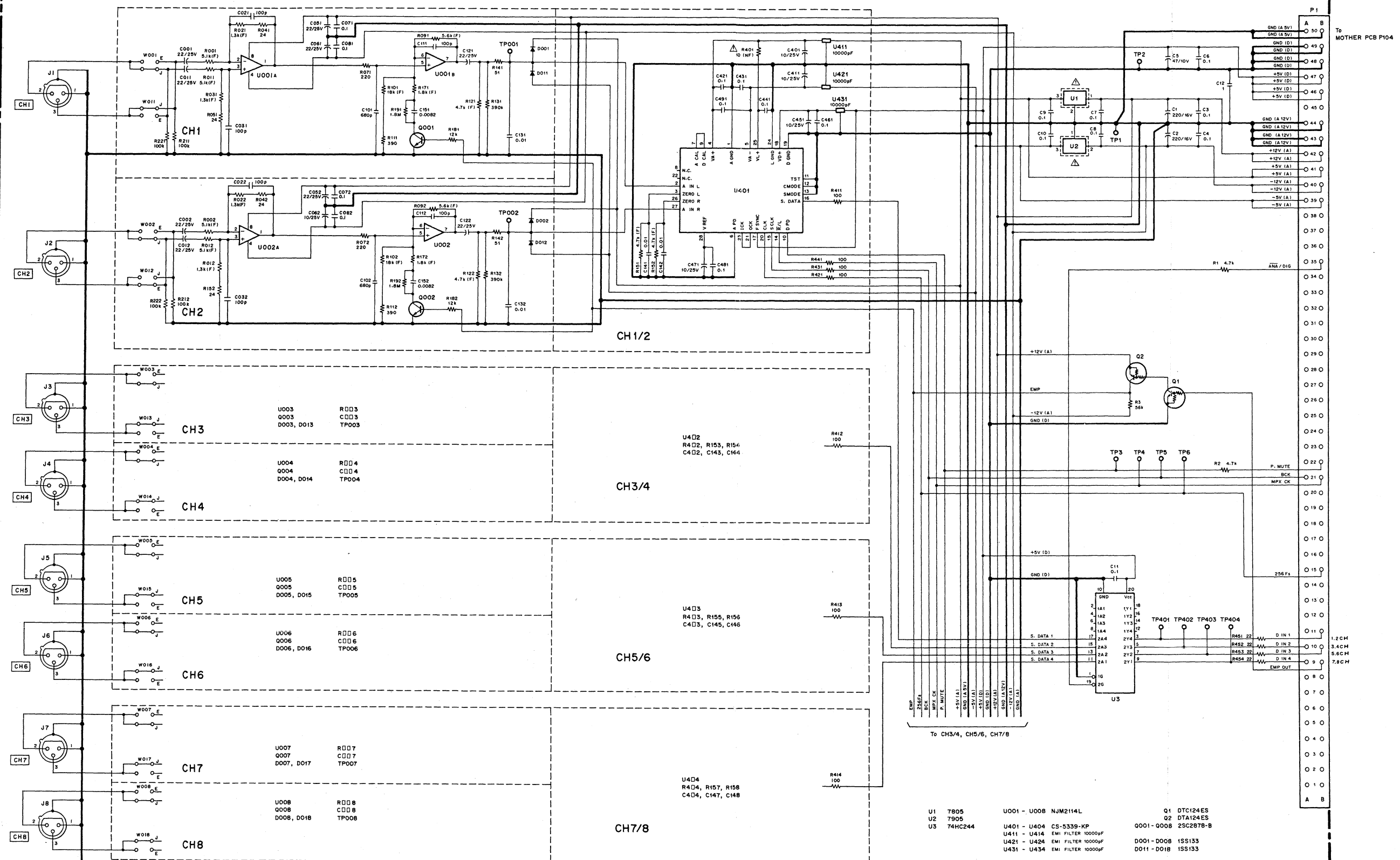
RM-D800



- ⑲ OPERATION PCB : Operation Board
- ⑳ CONTROL PCB : Control Board
- ㉑ JOG PCB : Jog Board
- ㉒ V-REG PCB : Voltage Regulator Board

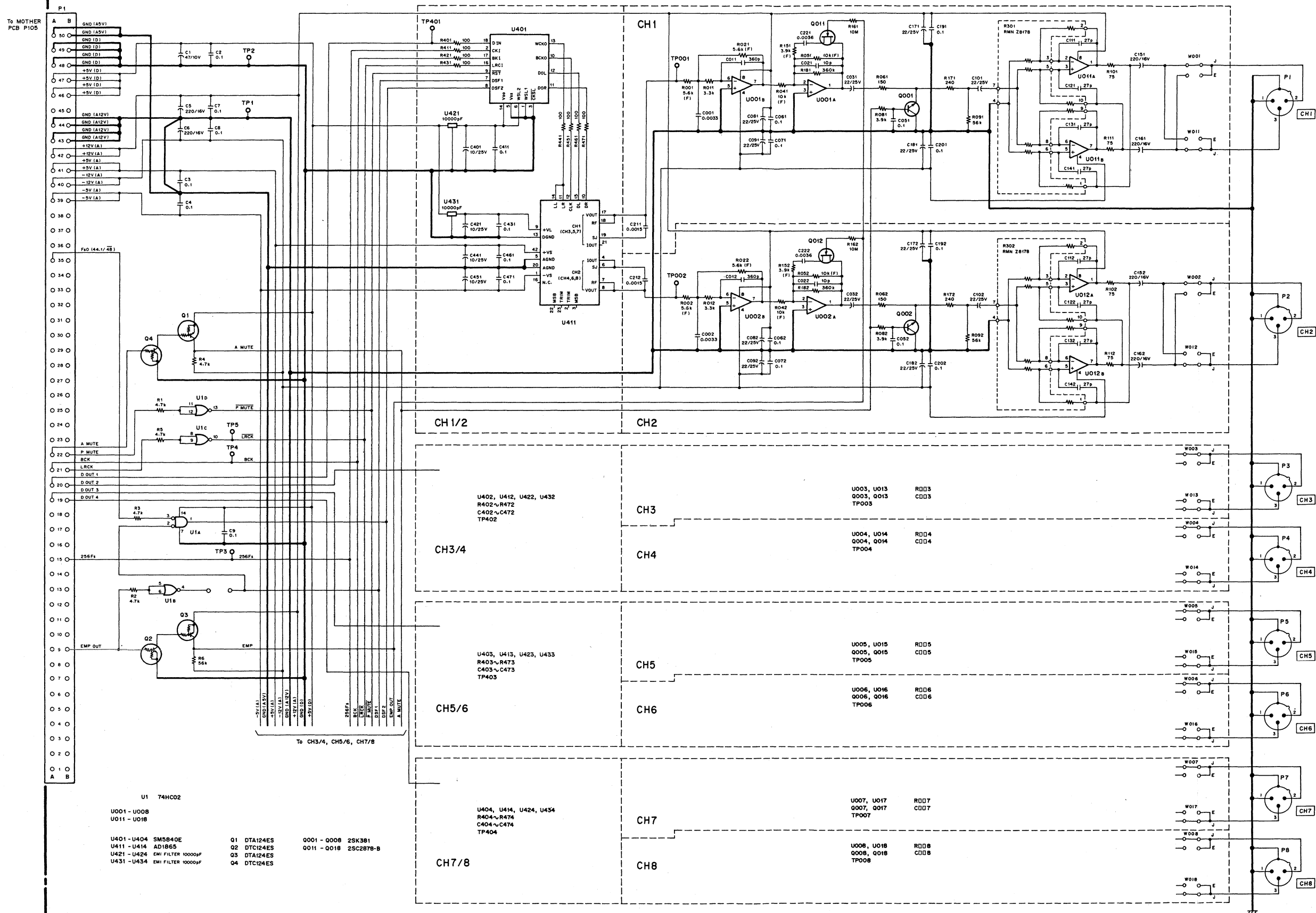
5-1. PCM-800

Analog to Digital Converter Board

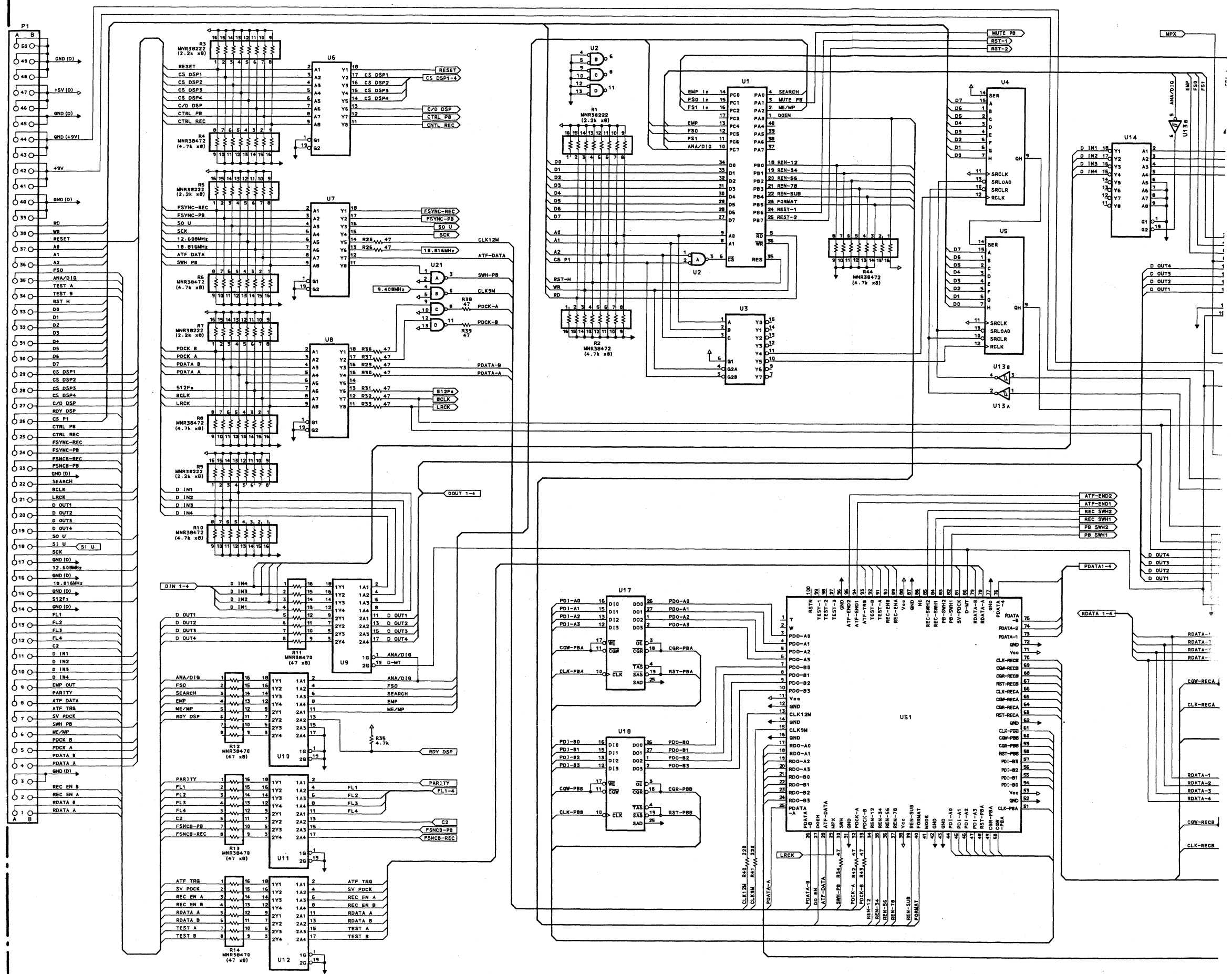


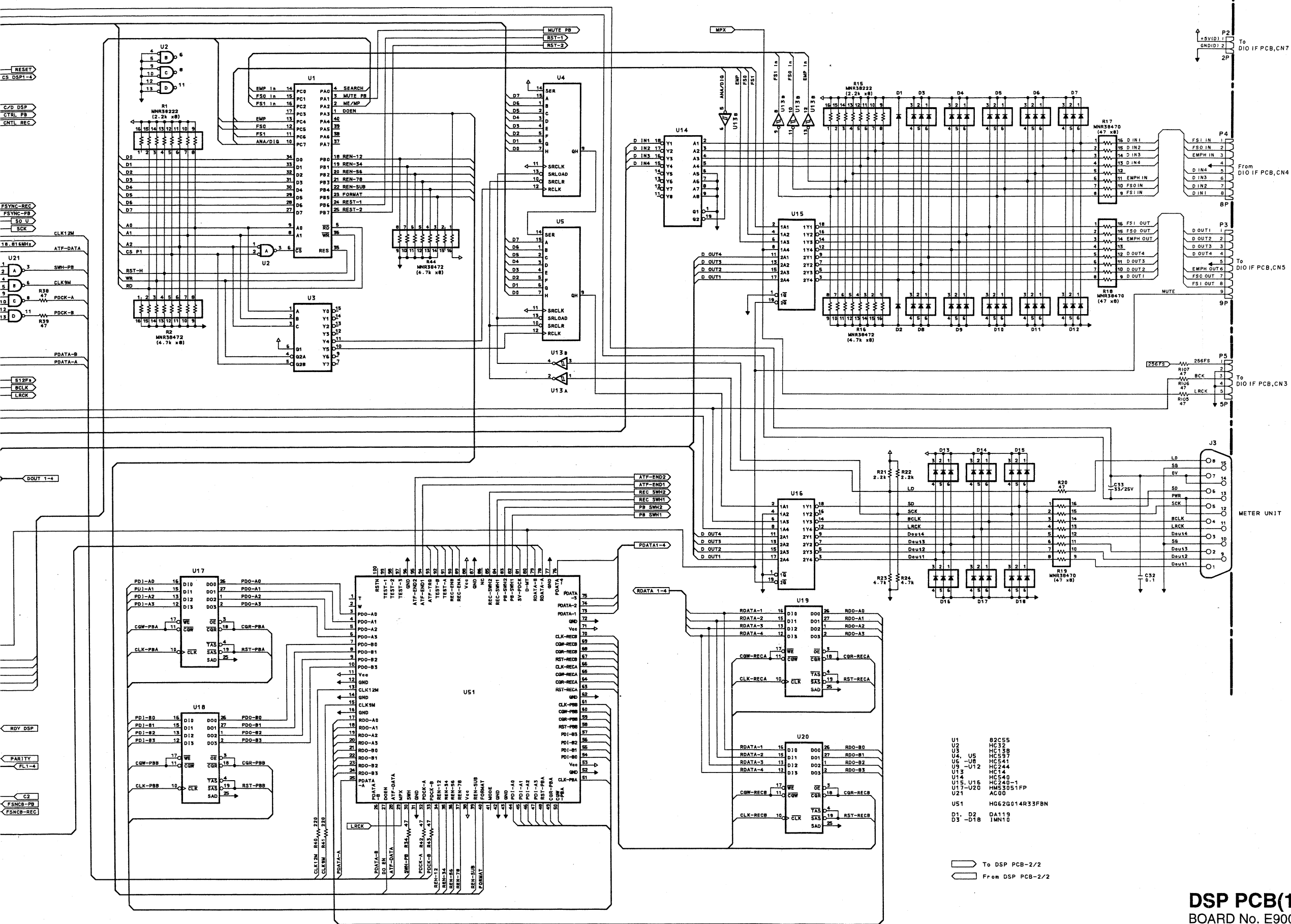
A/D PCB
BOARD No. E9001 41-00A
PCM-800

Digital to Analog Converter Board



D/A PCB
 BOARD No. E900142-00A
 PCM-800

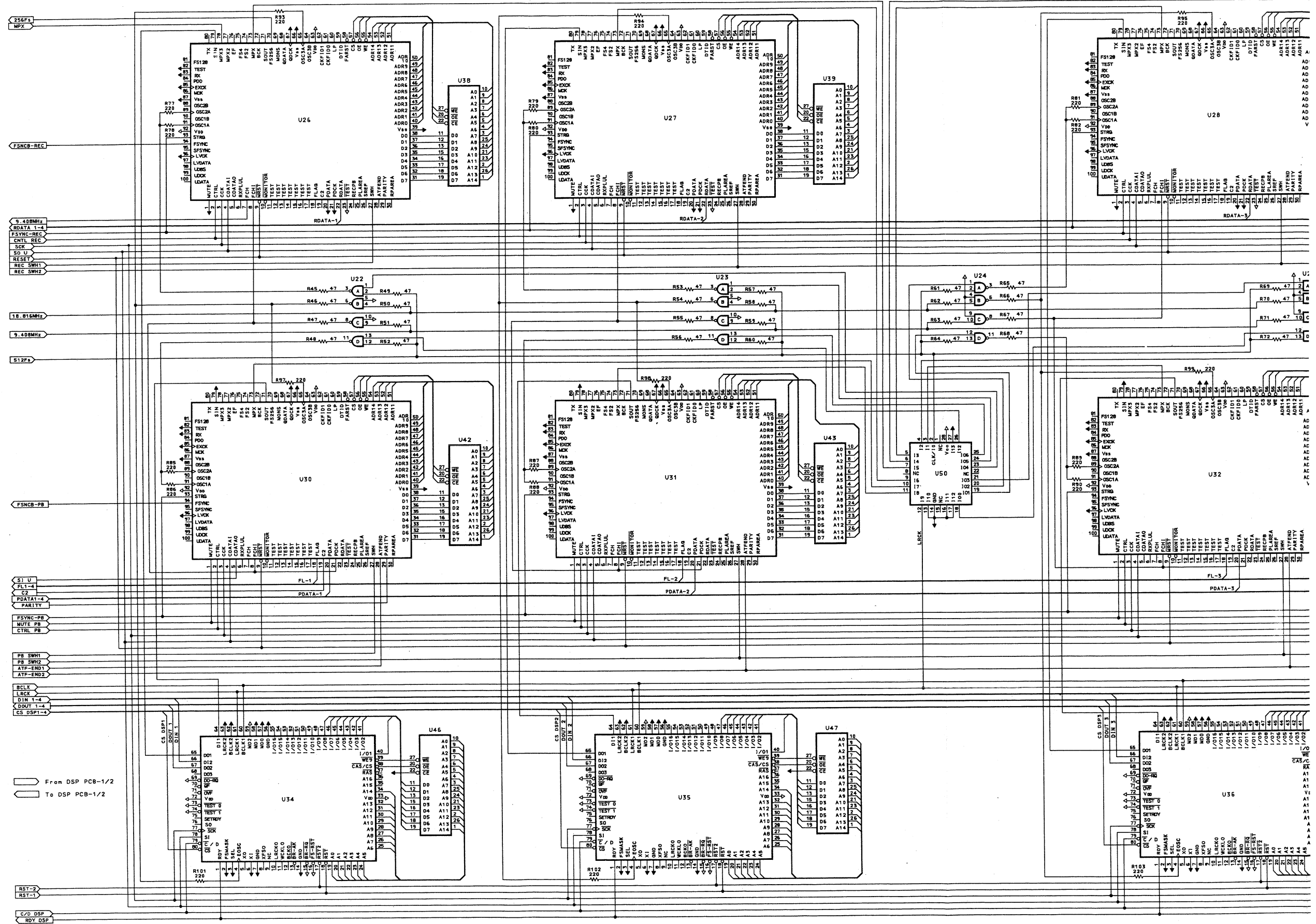


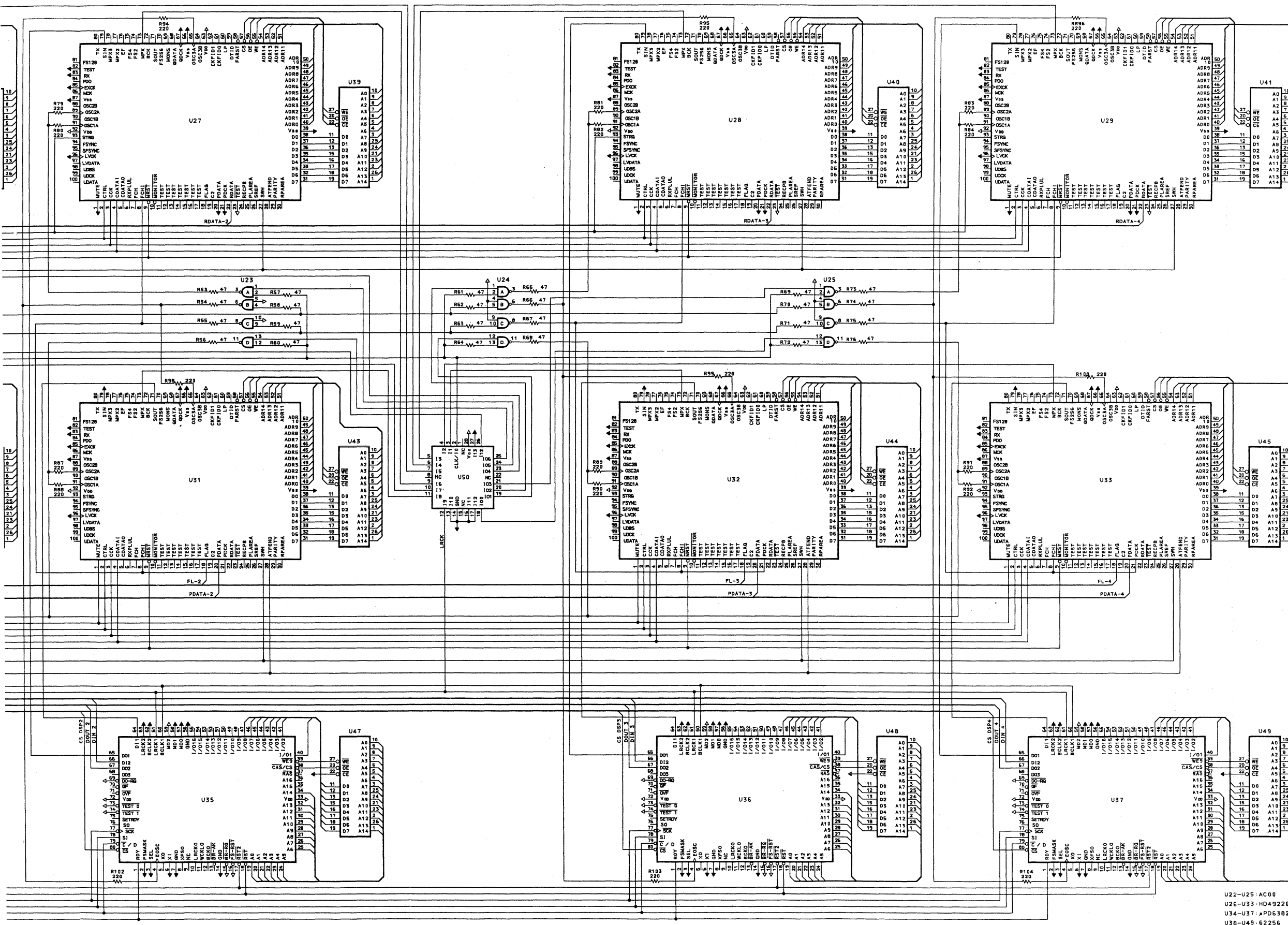


- U1 82C55
- U2 HC32
- U3 HC138
- U4 HC597
- U5 HC541
- U6 HC244
- U7 HC14
- U8 HC540
- U9 HC240-1
- U10 HC5051FP
- U11 AC00
- U12
- U13
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- U100

DSP PCB(1/2)
BOARD No. E900067-00A
PCM-800

Digital Signal Processing Board

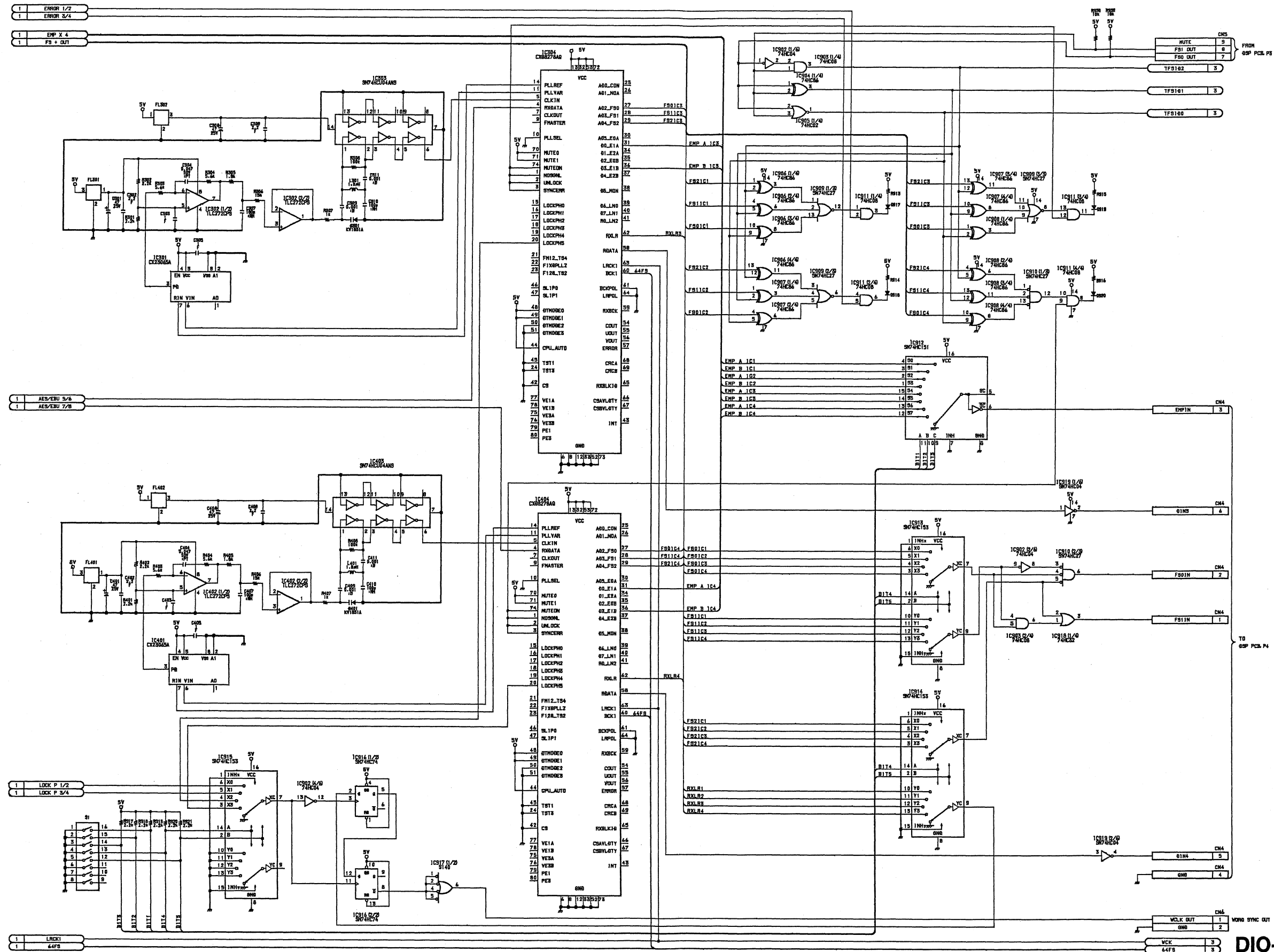




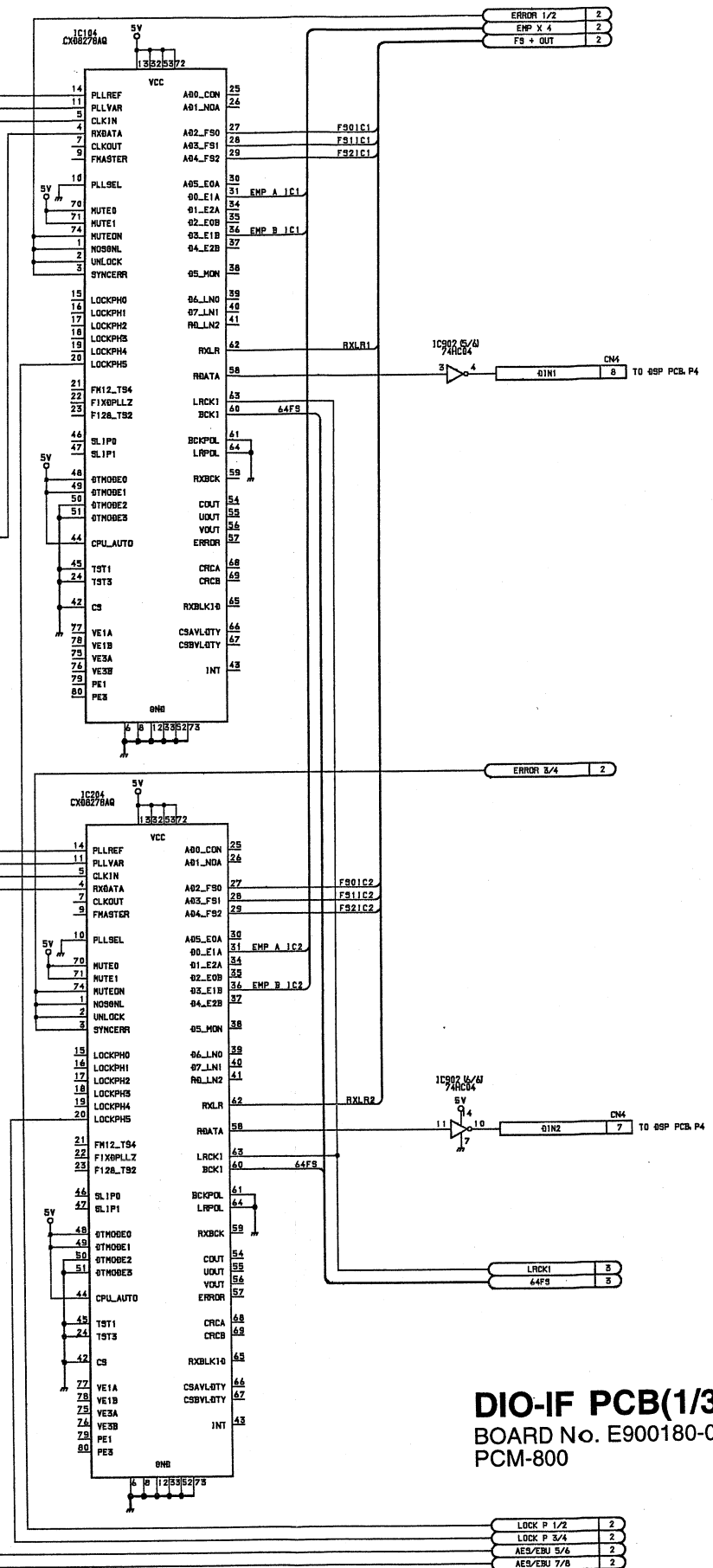
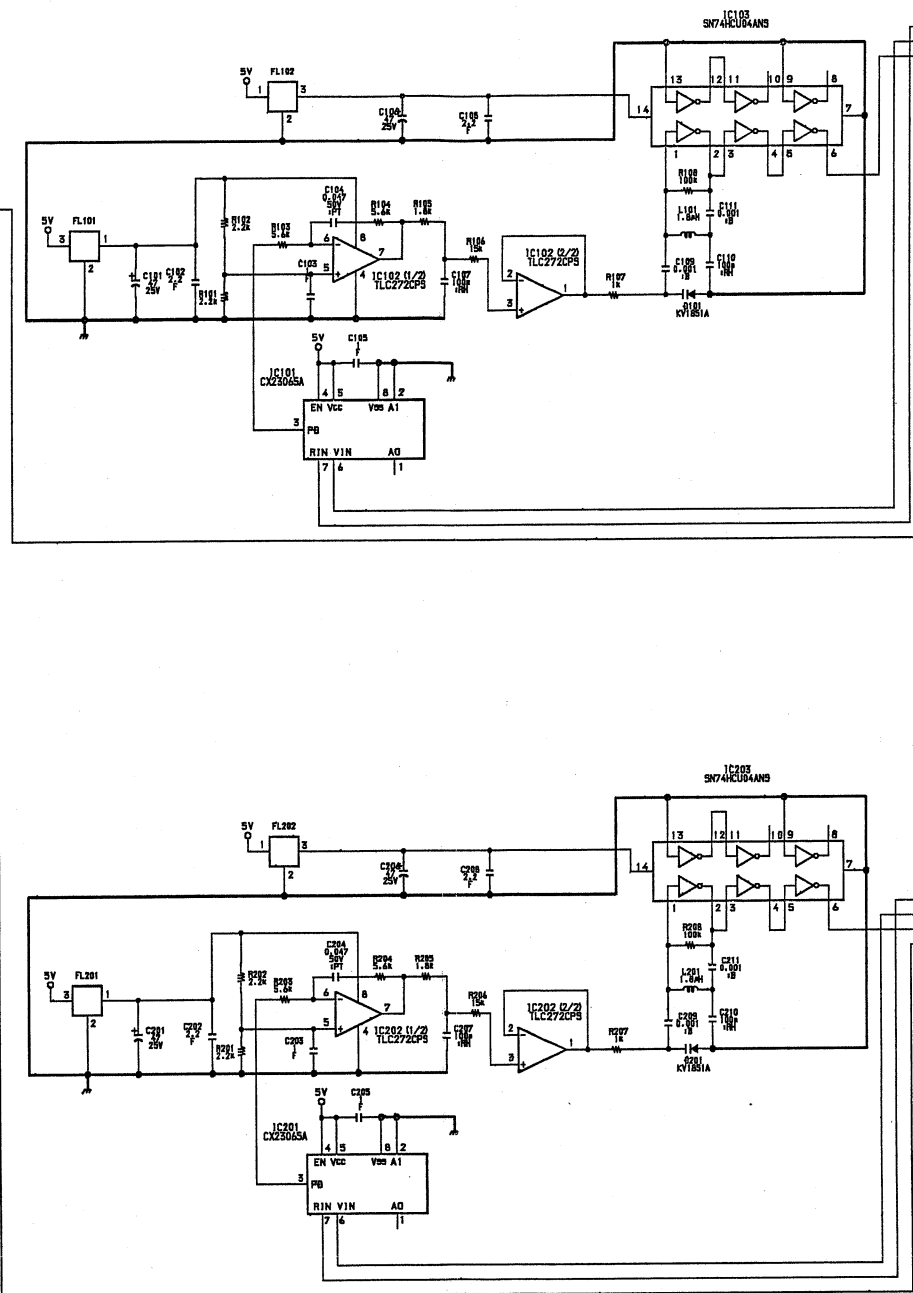
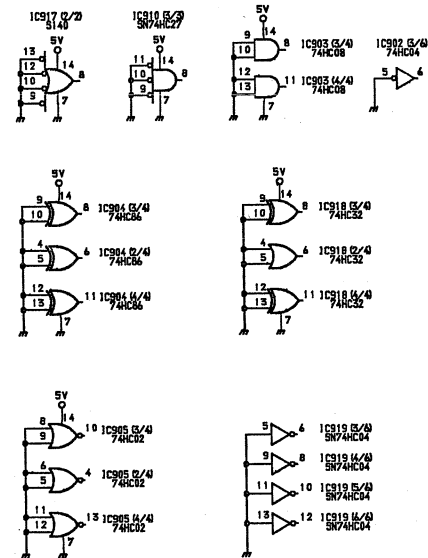
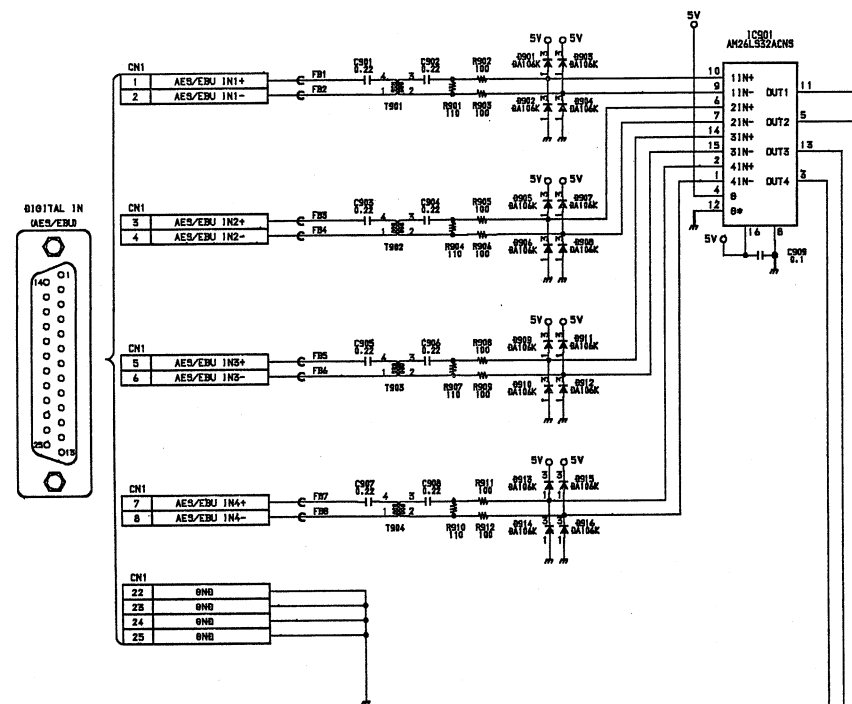
U22-U25: AC00
U26-U33: HD49226
U34-U37: PD6382
U38-U49: 62256

DSP PCB(2/2)
BOARD No. E900067-00A
PCM-800

Digital Input/Output Interface Board

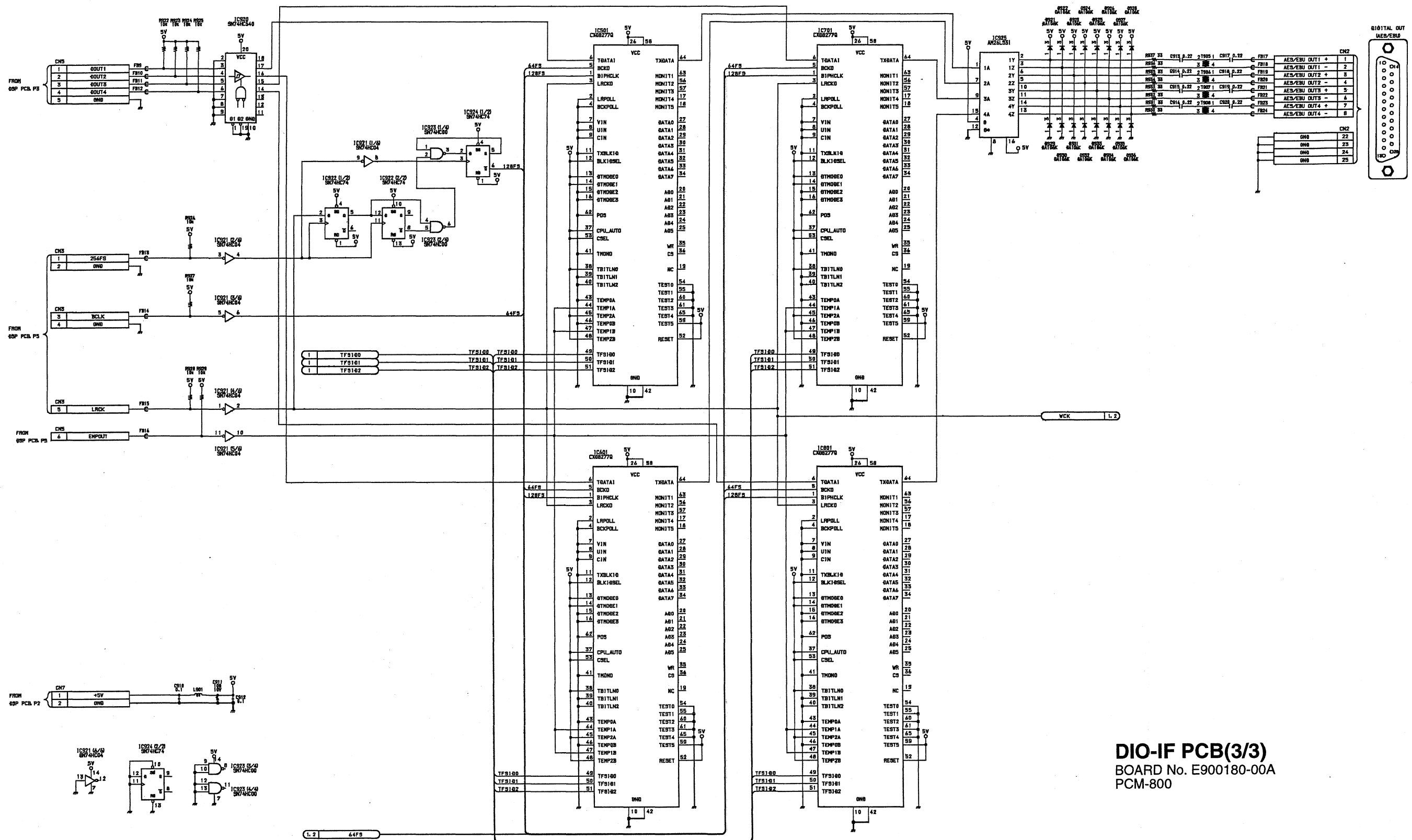


Digital Input/Output Interface Board

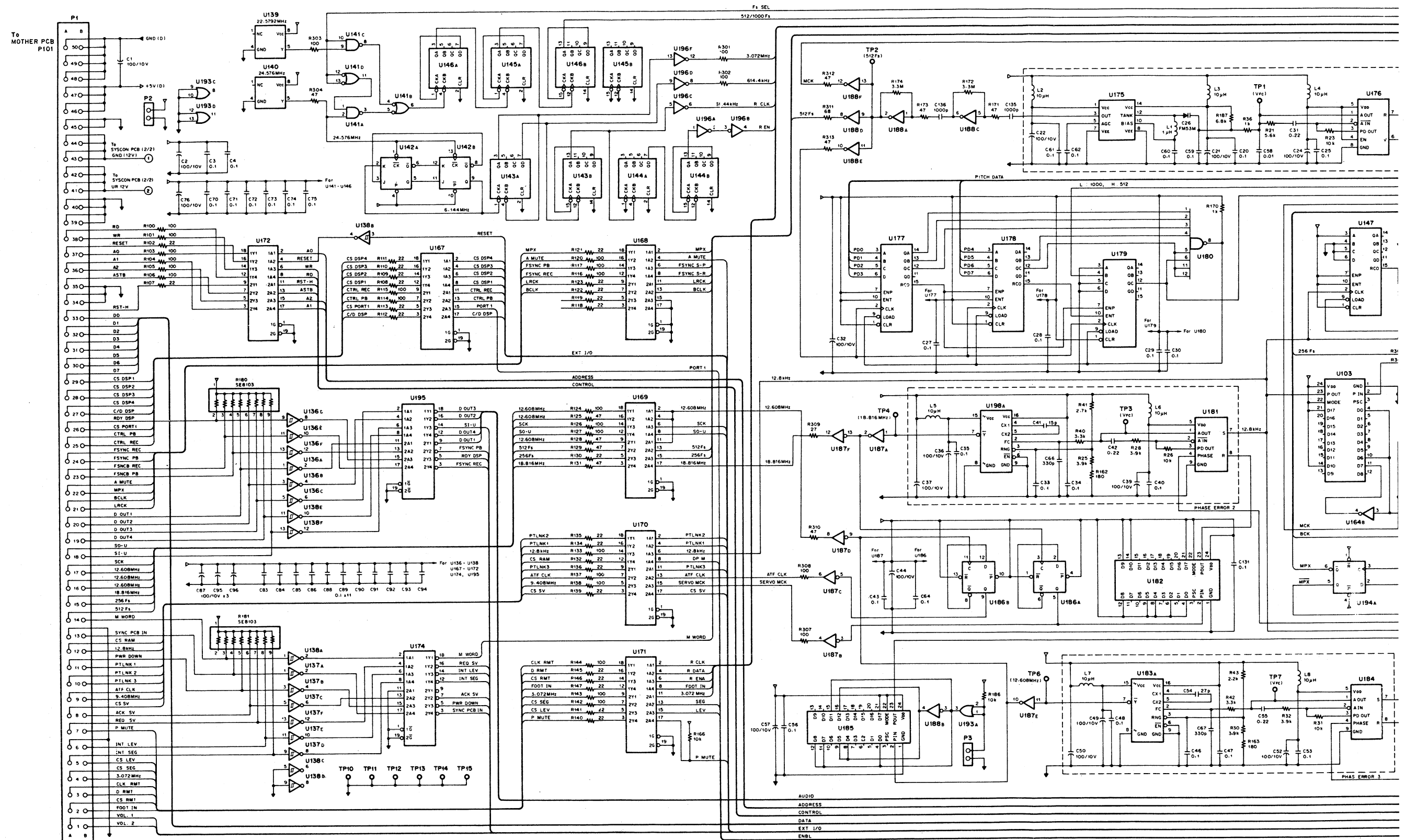


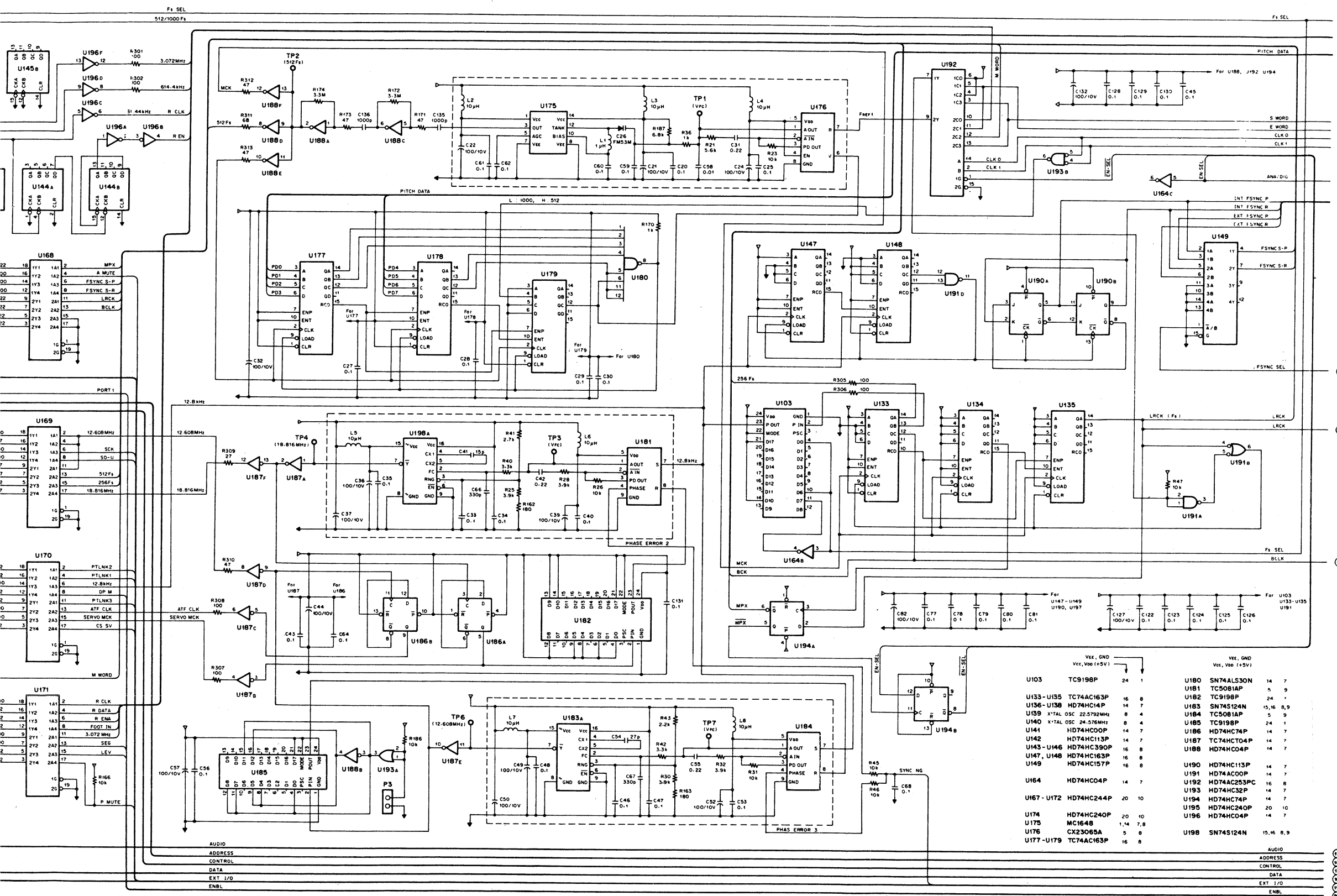
DIO-IF PCB(1/3)
BOARD No. E900180-00A
PCM-800

Digital Input/Output Interface Board



System Control Board



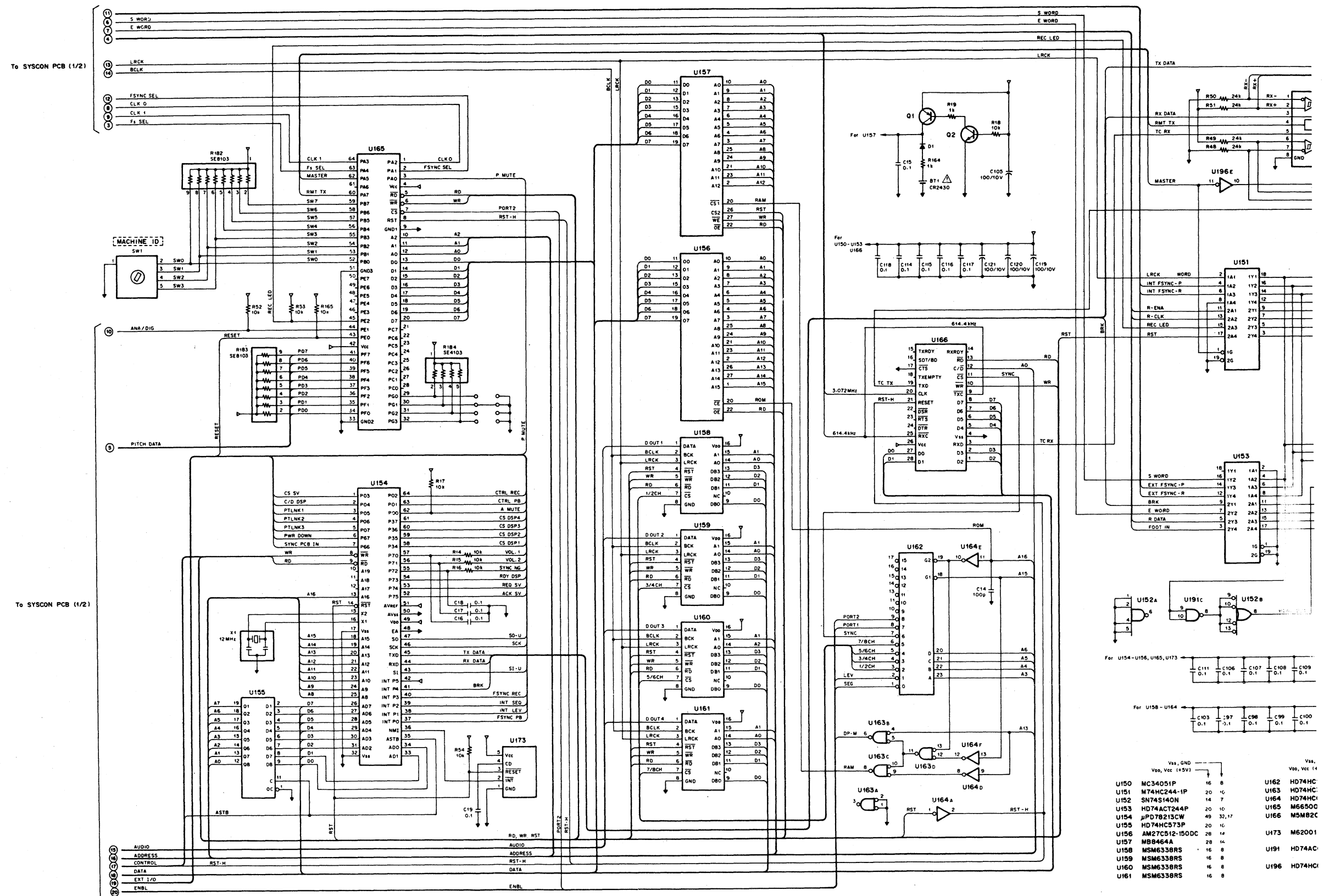


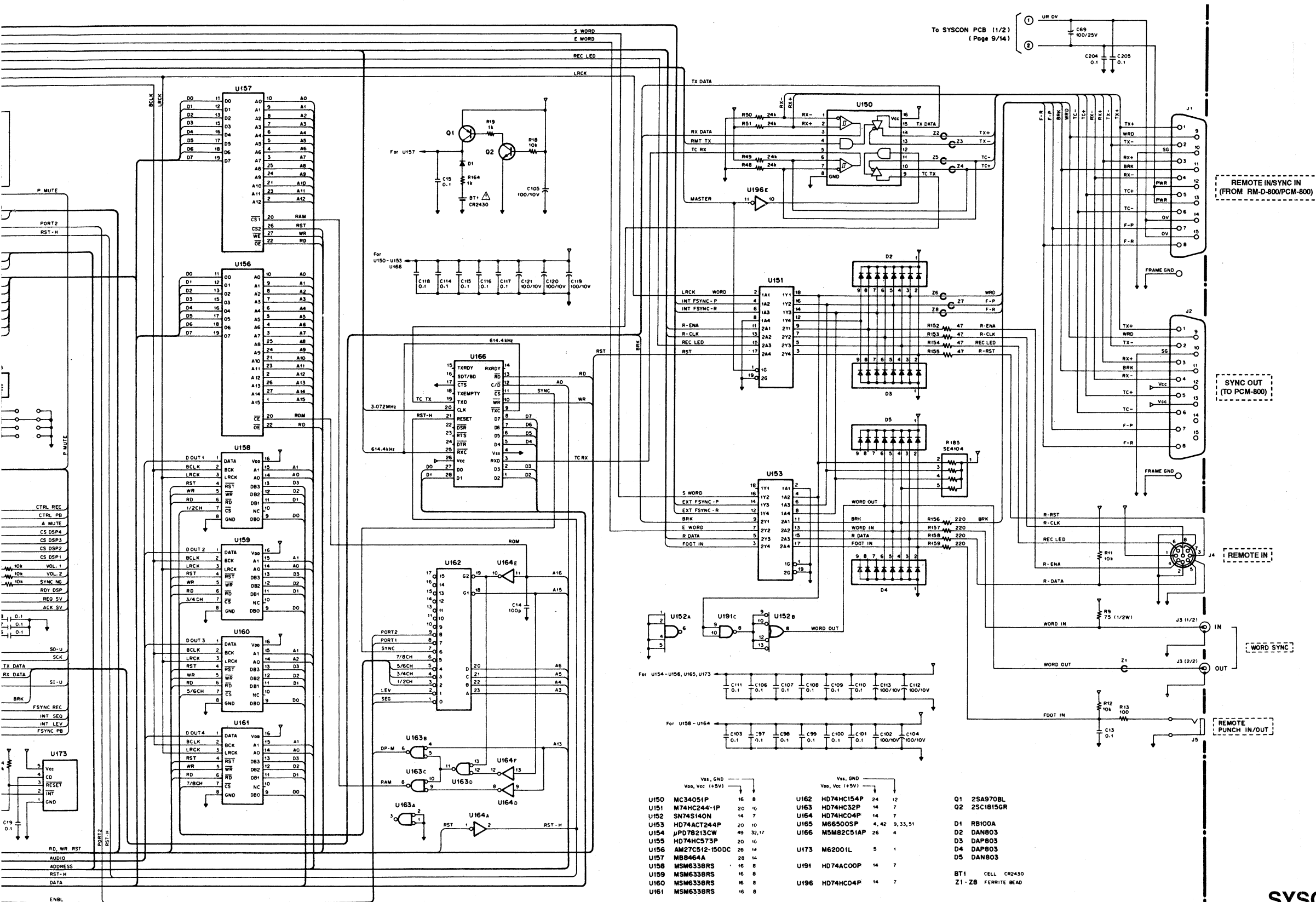
SYSCON PCB (1/2)

To SYSCON PCB (2/2)

SYSCON PCB(1/2)
BOARD No. 52103517-02
PCM-800

System Control Board

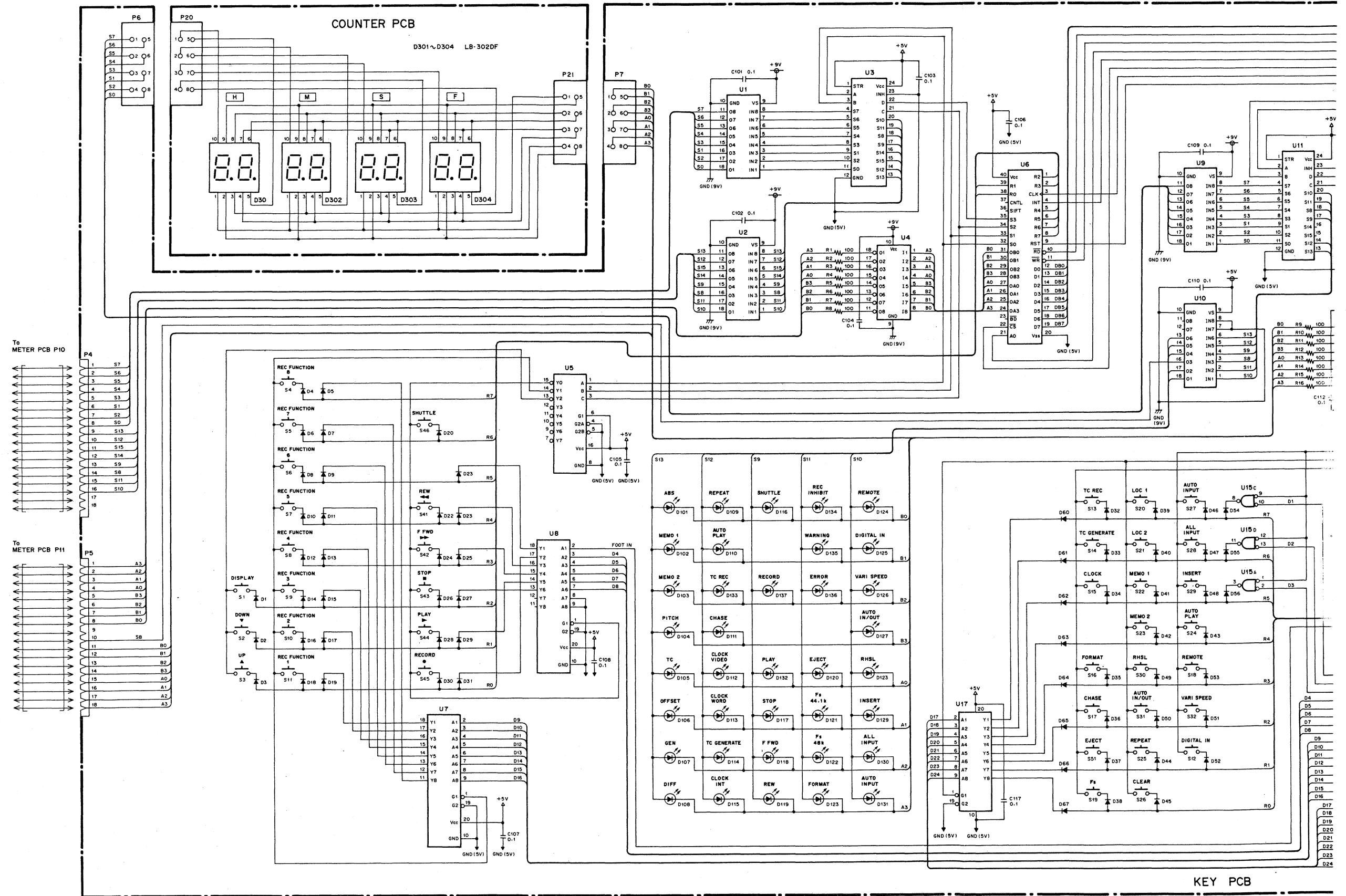


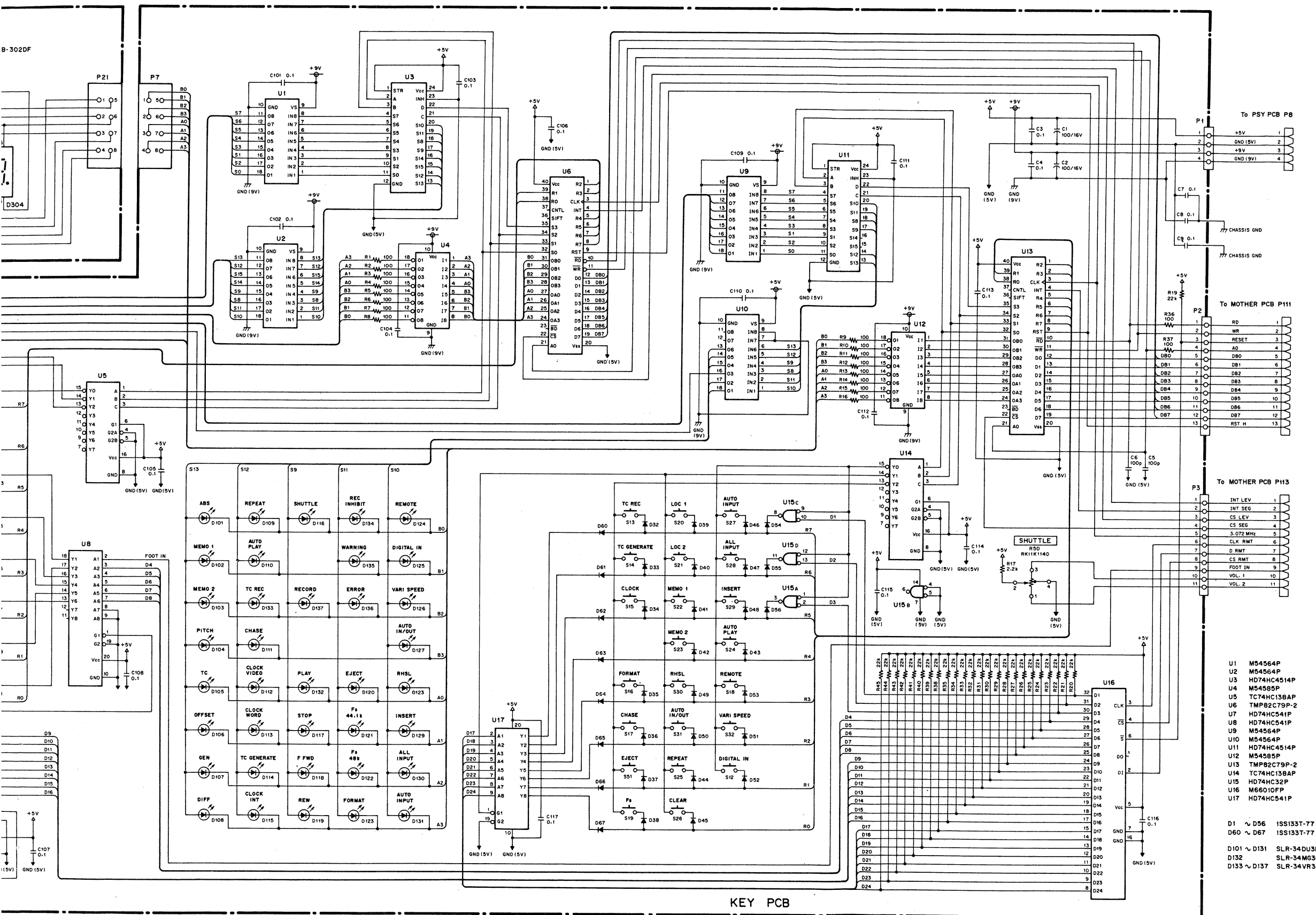


SYSCON PCB (2/2)

SYSCON PCB(2/2)
BOARD No. 52103517-02
PCM-800

Key Board/Counter Board





- U1 M54564P
 - U2 M54564P
 - U3 HD74HC4514P
 - U4 M54585P
 - U5 TC74HC138AP
 - U6 TMP82C79P-2
 - U7 HD74HC541P
 - U8 HD74HC541P
 - U9 M54564P
 - U10 M54564P
 - U11 HD74HC4514P
 - U12 M54585P
 - U13 TMP82C79P-2
 - U14 TC74HC138AP
 - U15 HD74HC32P
 - U16 M66010FP
 - U17 HD74HC541P
- D1 ~ D56 1SS133T-77
 D60 ~ D67 1SS133T-77
 D101 ~ D131 SLR-34DU3F
 D132 SLR-34MG3F
 D133 ~ D137 SLR-34VR3F

KEY PCB
 BOARD No. 52103524-00
COUNTER PCB
 BOARD No. 52103526-00
 PCM-800

1

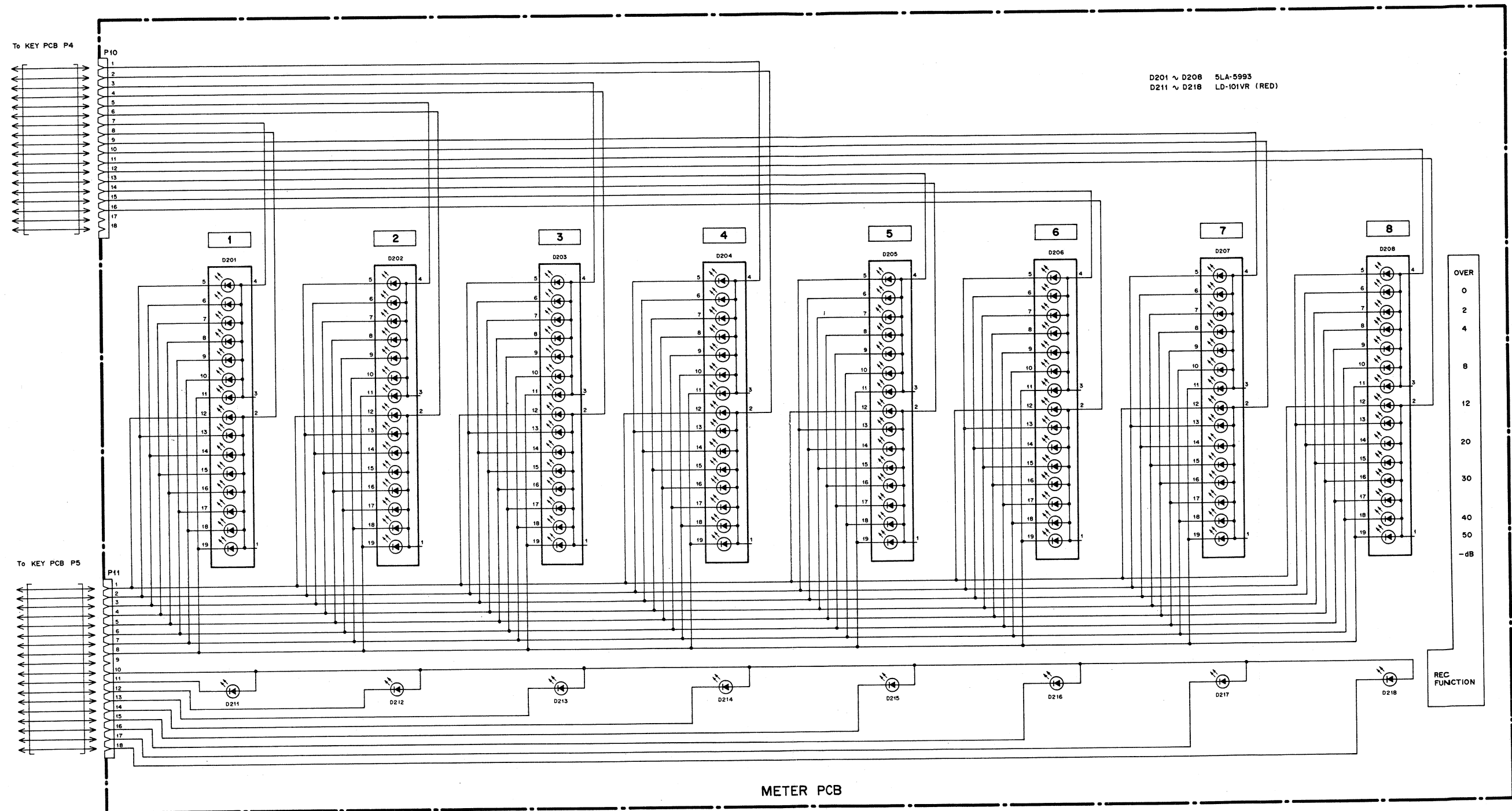
2

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5

Meter Board



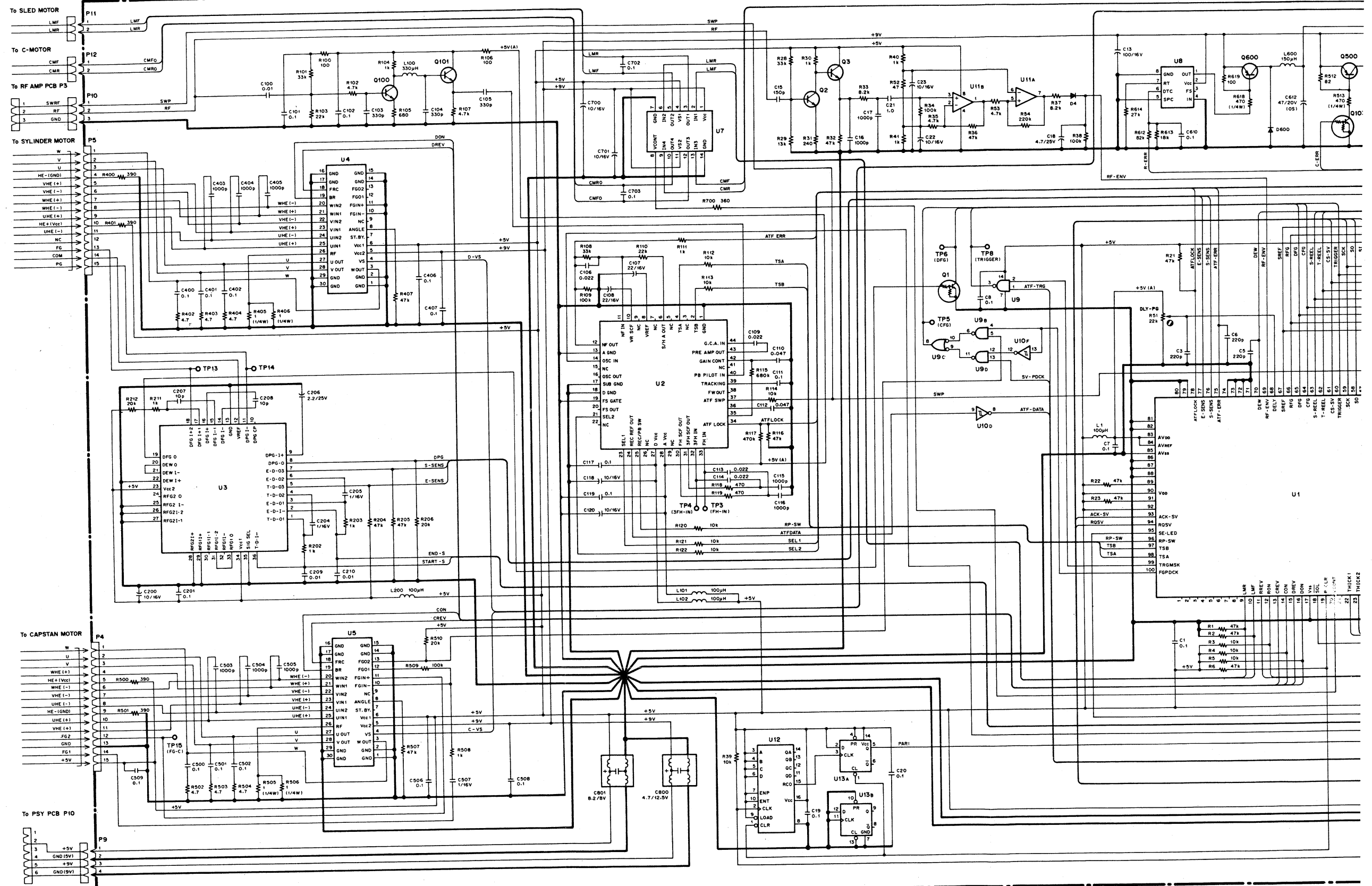
METER PCB
BOARD No. 52103525-00
PCM-800

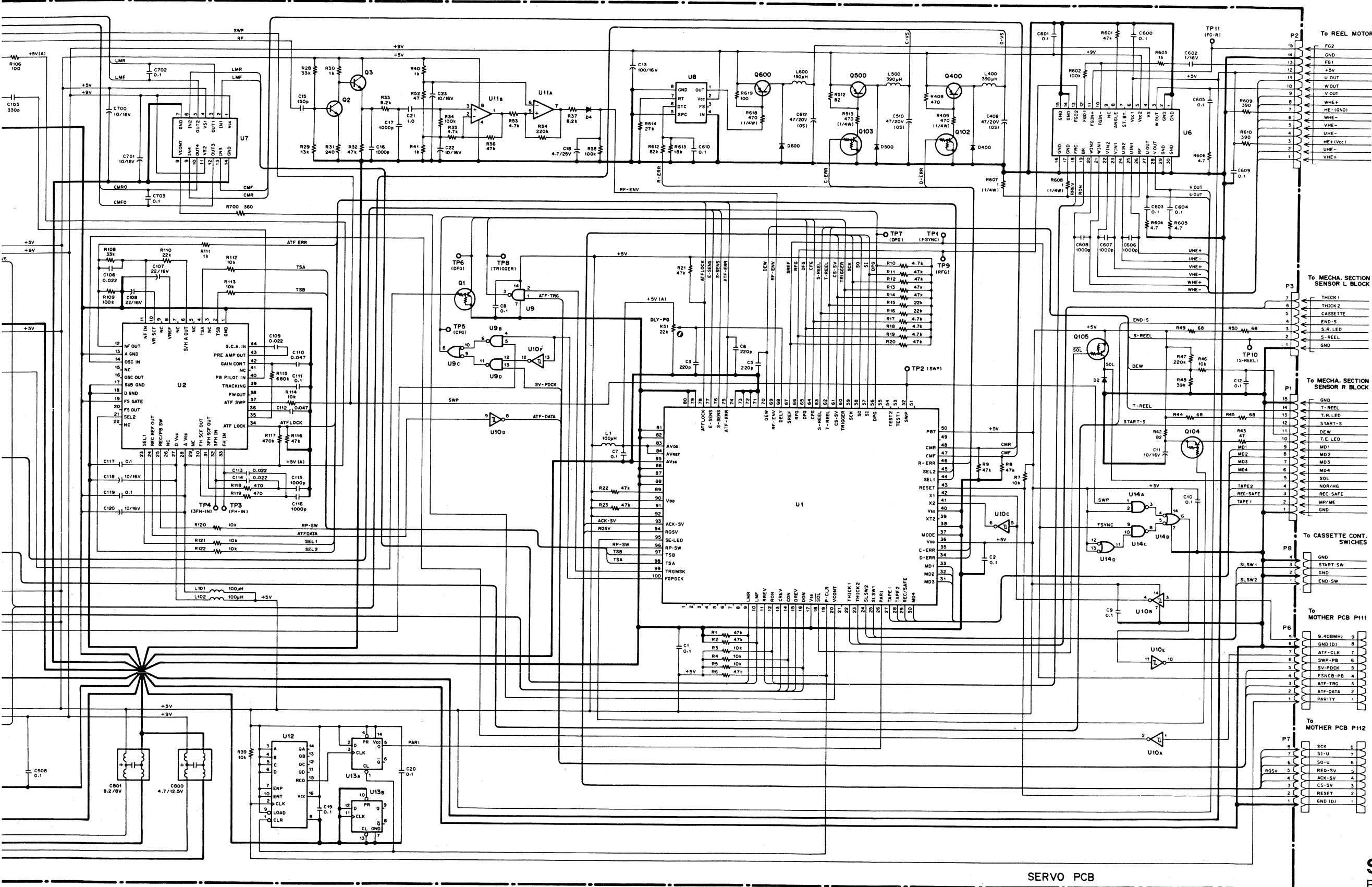
REC/PLAY AMP PCB

5-25



Servo Board



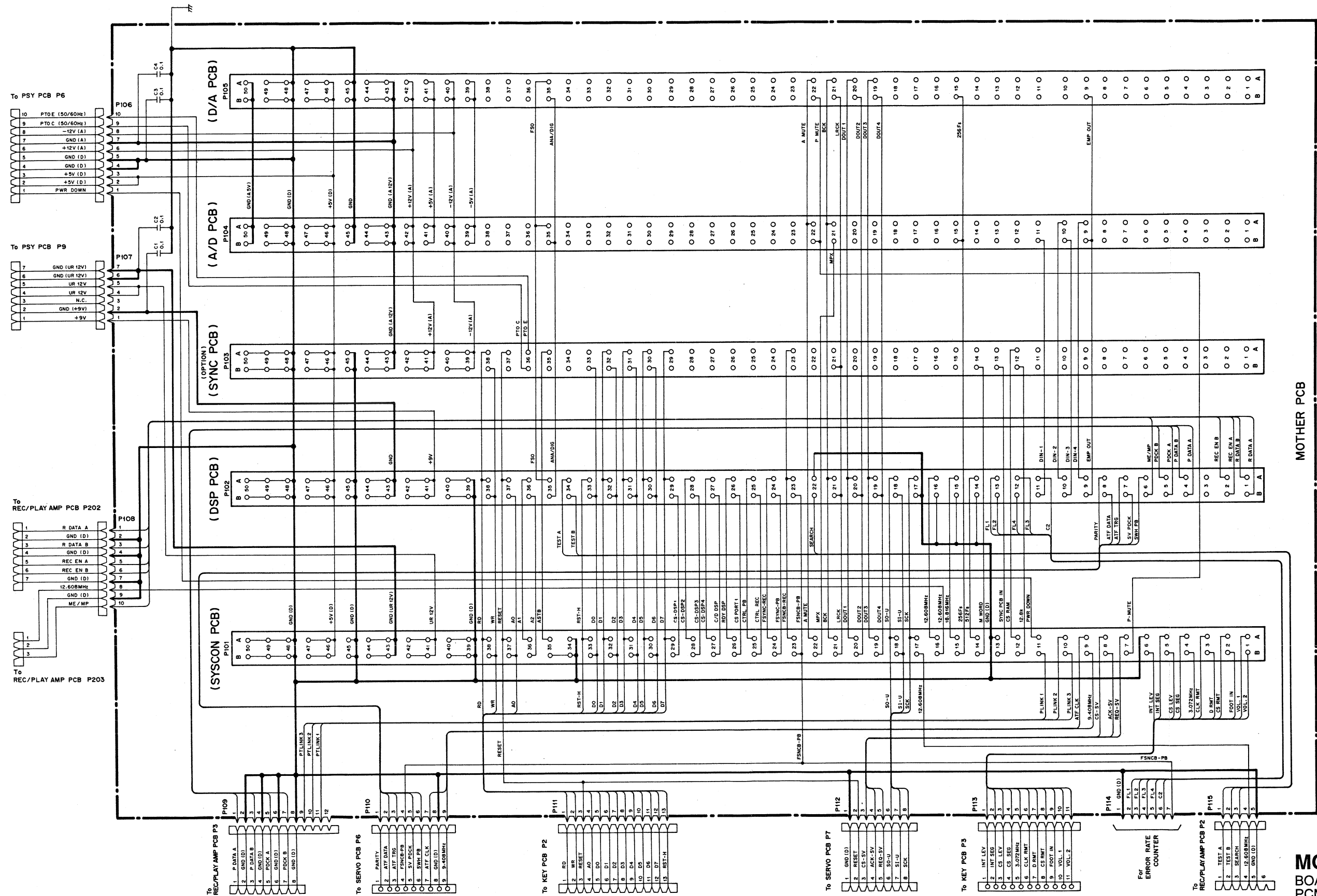


D2	DA119
D4	DA119
D400	EC10Q
D500	EC10Q
D600	EC10Q

4

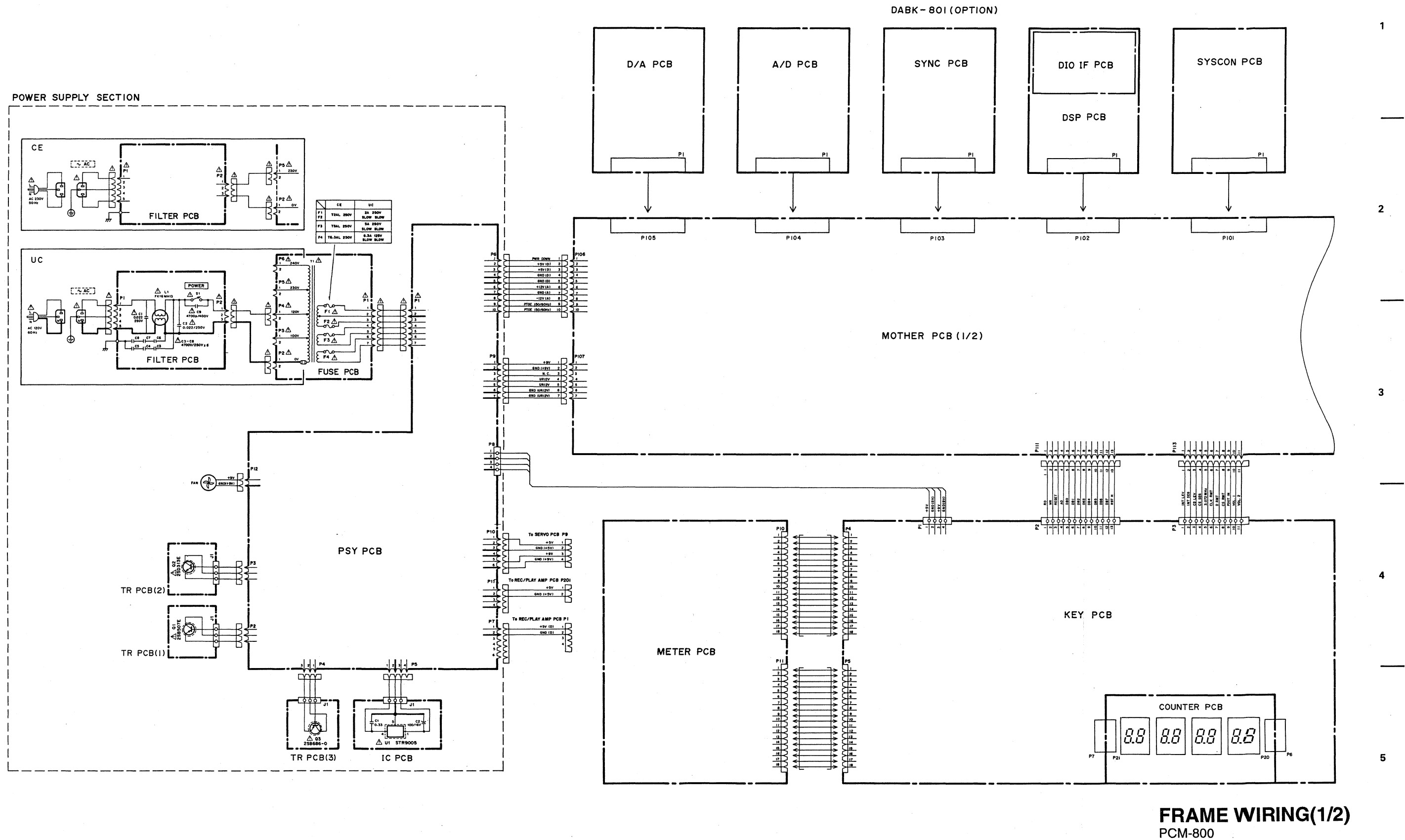
5-31

Mother Board



MOTHER PCB
BOARD No. 52103521-01
PCM-800

Frame Wiring PCM-800 (1/2)

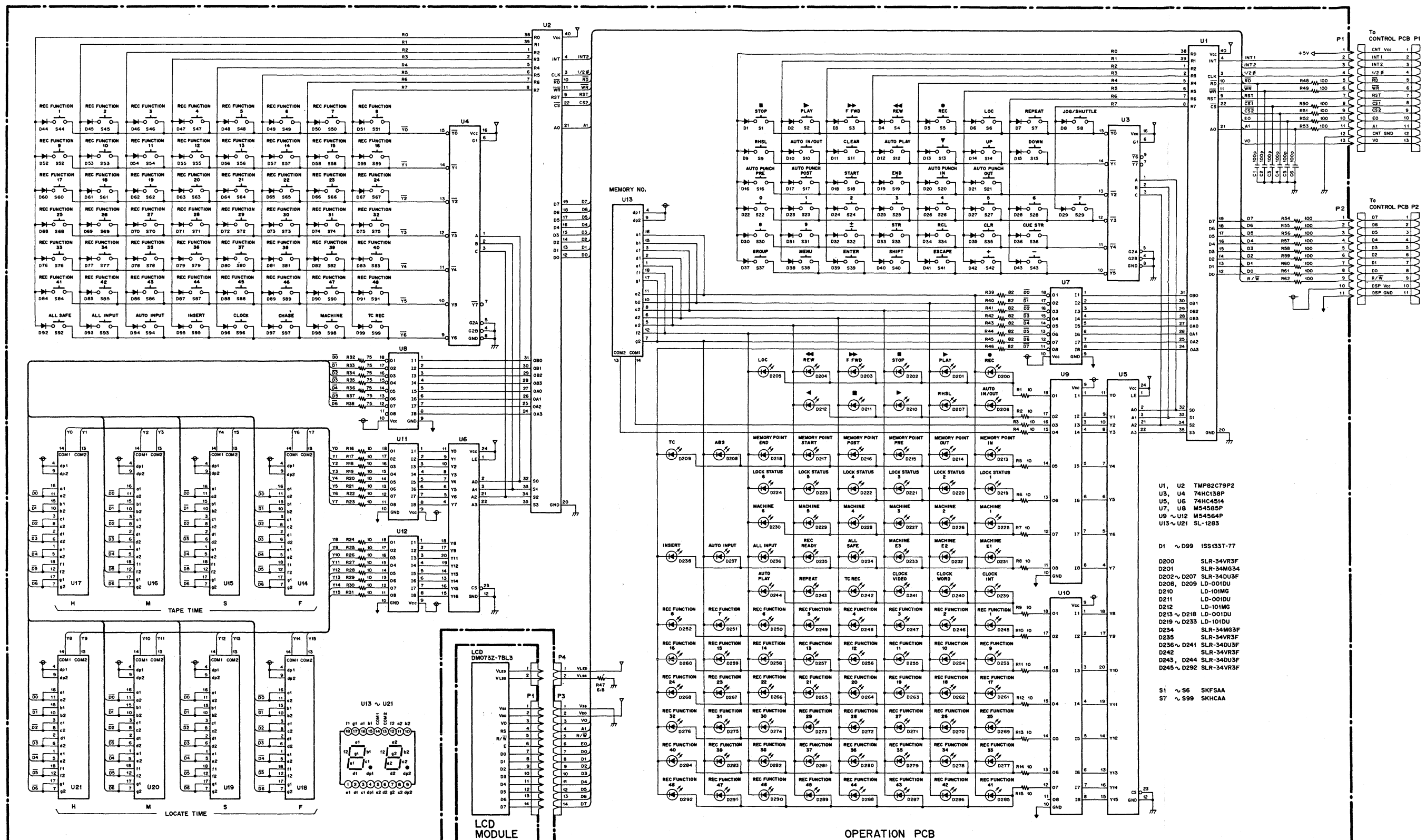


A



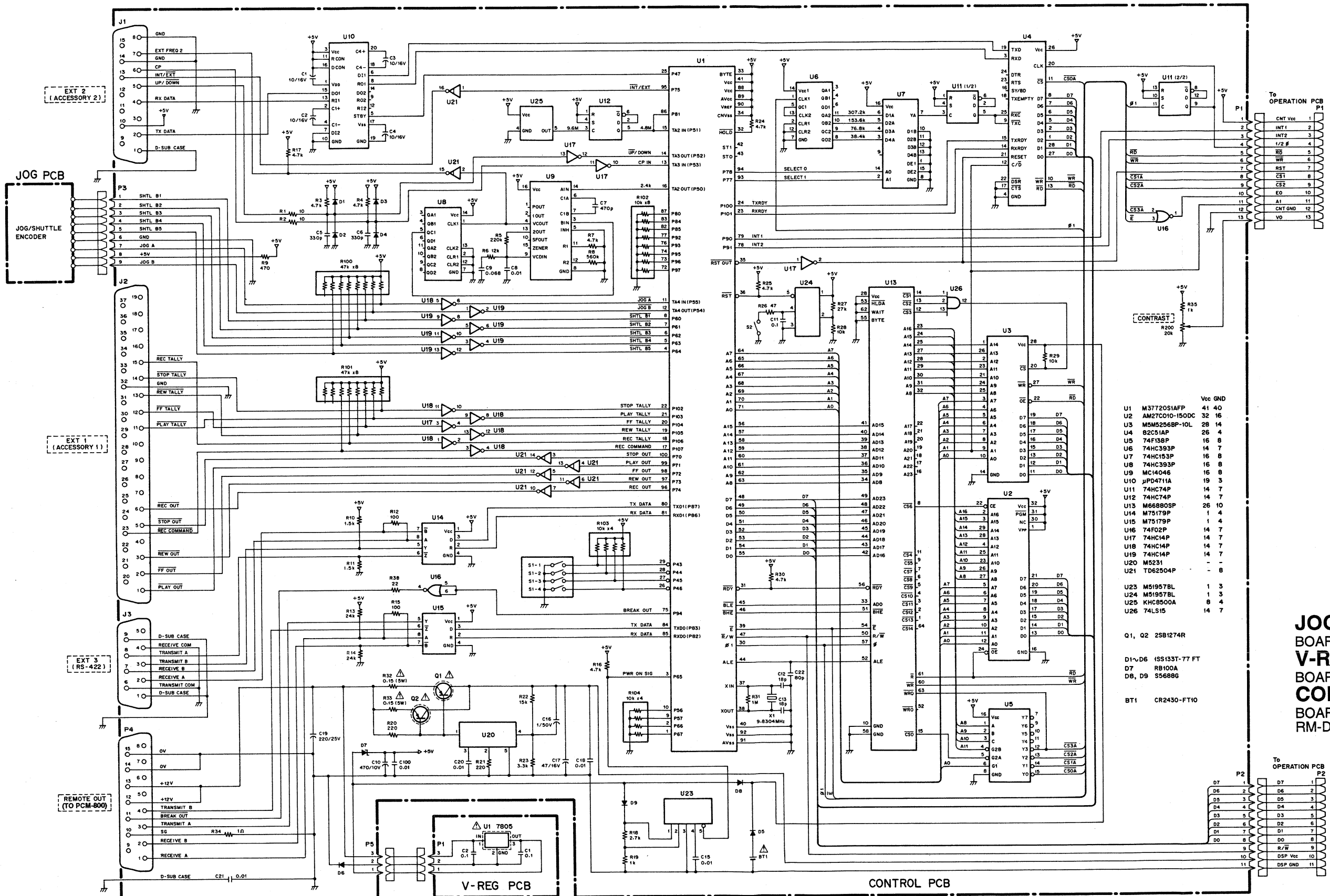
5-2. RM-D800

Operation Board



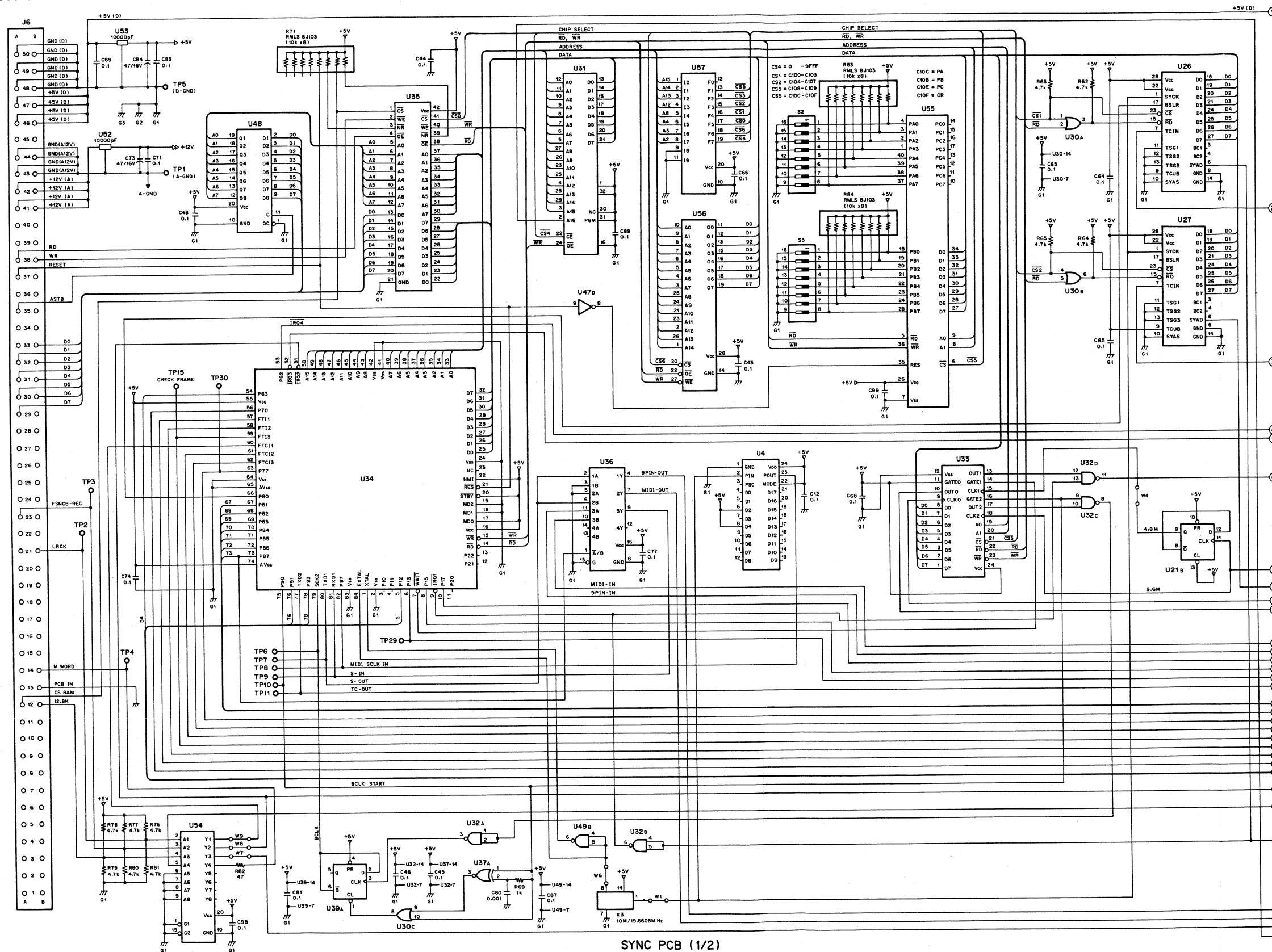
OPERATION PCB
BOARD No. 52103539-01
RM-D800

Control Board/Jog Board/Voltage Regulator Board



JOG PCB
BOARD No. 52103542-00
V-REG PCB
BOARD No. 52103583-00
CONTROL PCB
BOARD No. 52003541-01
RM-D800

5-3. DABK-801 Sync Board

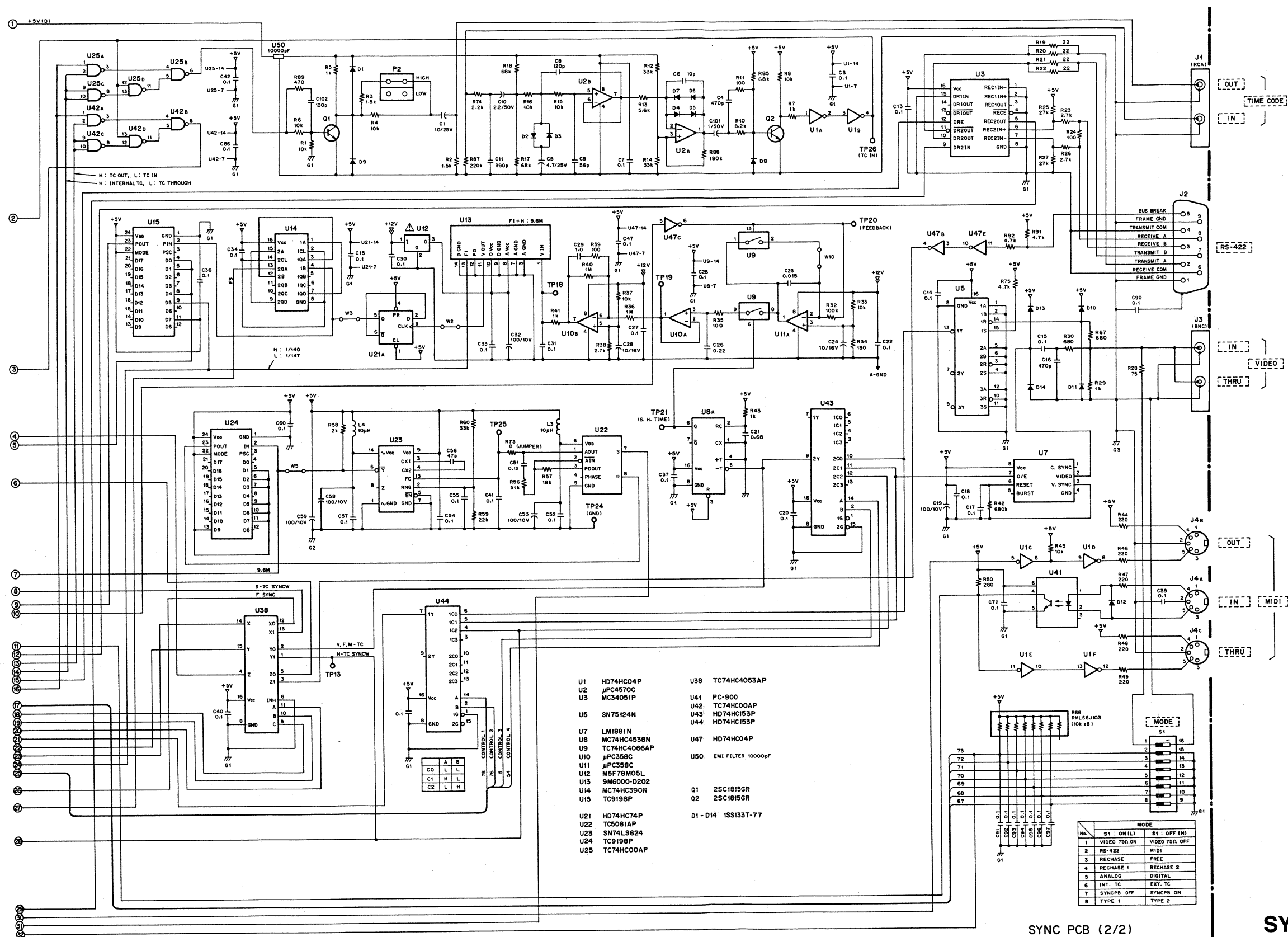


- U14 TC9198P
- U21 HD74HC74P
- U26 μ PD65013
- U27 μ PD65013
- U30 HD74HC32P
- U31 AM27C101K
- U32 TC74HC00AP
- U33 μ PD71054C-10
- U34 HD645348RA00M
- U35 M66220
- U36 HD74HC157P
- U37 TC74HC266AP
- U39 HD74HC157P
- U47 HD74HC04P
- U48 HD74HC573P
- U49 TC74HC00AP
- U52 EMI FILTER 10000pF
- U53 EMI FILTER 10000pF
- U54 HD74HC541P
- U55 M5M82C55AP-2
- U56 LH52250A-10TL
- U57 PAL16V8

SYNC PCB (1/2)

SYNC PCB(1/2)
BOARD No. 52103543-02
DABK-801

Sync Board



SYNC PCB (2/2)

SYNC PCB(2/2)
BOARD No. 52103543-02
DABK-801

Section 6

Spare Parts

6-1. Notes on Spare Parts

(1) Safety Related Components Warning

Components marked with \triangle on the schematic diagrams, exploded views and electrical spare parts list are critical to safe operation.

Replace these components with Sony parts whose part numbers appear in this manual or in service bulletins and service manual supplements published by Sony.

(2) Standardization of Parts

Repair parts supplied from the Sony Parts Center may not be always identical with the parts which actually in use due to "accommodating the improved parts and/or engineering changes" or "standardization of genuine parts".

This manual's exploded views and electrical spare parts list are indicating the part numbers of "the standardized genuine parts at present".

(3) Stock of Parts

Parts marked with "o" SP (Supply Code) column of the spare parts list are not normally required for routine service work. Orders for parts marked with "o" will be processed, but allow for additional delivery time.

(4) Units for Capacitors, Inductors and Resistors

The following units are assumed in schematic diagrams, electrical parts list and exploded views unless otherwise specified.

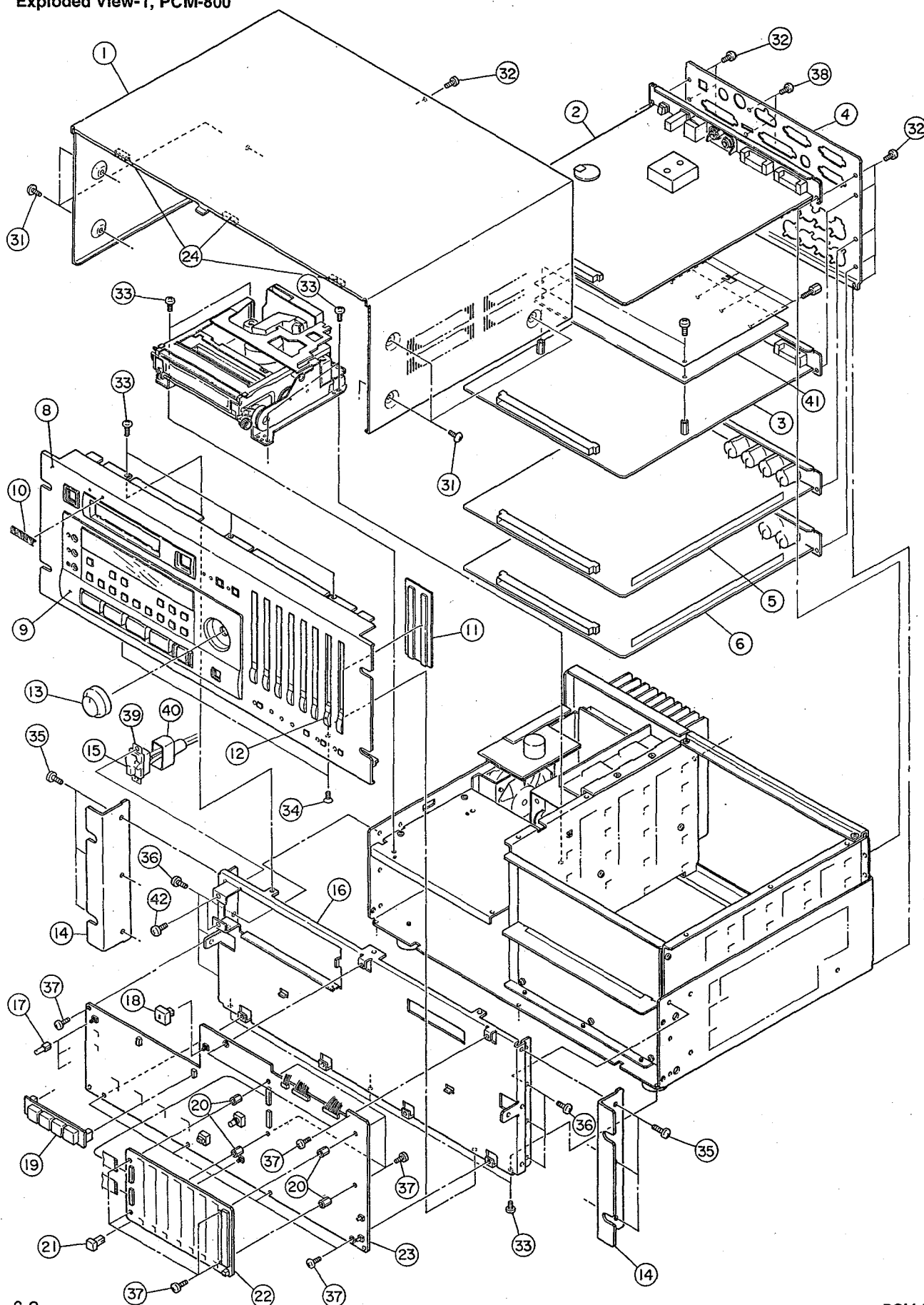
Capacitors : μF

Inductors : μH

Resistors : Ω

EXPLODED VIEW-1, PCM-800

6-2. PCM-800 Exploded Views Exploded View-1, PCM-800

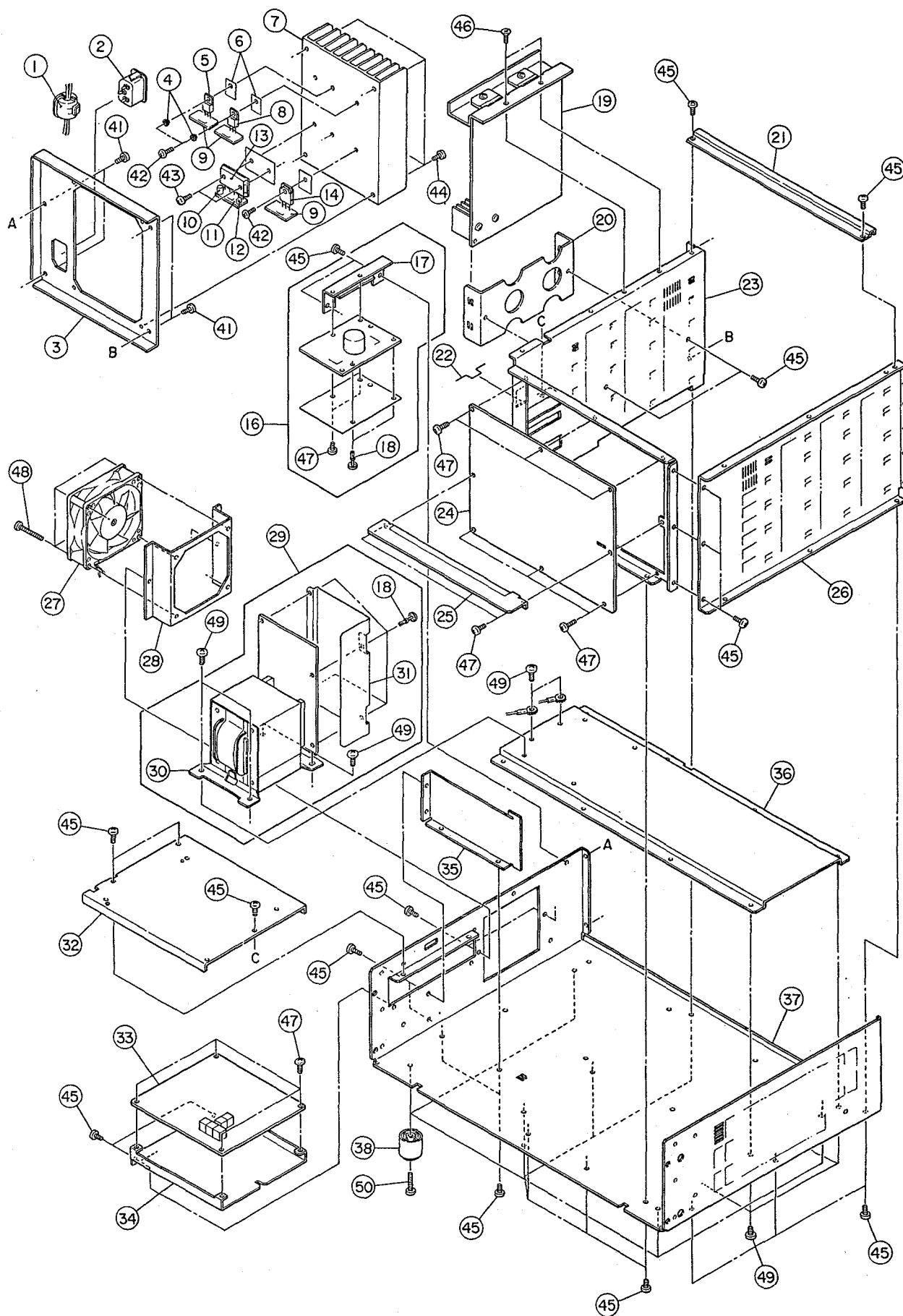


EXPLODED VIEW-1, PCM-800

No.	Part No.	SP Description
1	9-933-188-01	o BONNET, PCM-800
2	9-909-928-01	o SYSCON PCB ASSY
3	9-909-947-01	o DSP PCB ASSY
4	9-933-058-01	o REAR PANEL, REA/AES/STD
5	9-909-929-01	o A/D PCB ASSY
6	9-909-930-01	o D/A PCB ASSY
8	9-933-166-01	o FRONT PANEL PCM-800 (include No.9 and 12)
9	9-933-137-01	o ESCUTCHEON, ASSY FRONT
10	3-718-322-02	o EMBLEM, SONY
11	9-933-354-01	o METER COVER
12	9-933-164-01	s BUTTON, R.FNC
13	9-933-163-01	s KNOB, SHUTTLE
14	9-933-357-01	o ANGLE, MOUNT
15	3-688-814-11	s CAP, SWITCH
16	9-933-359-01	o FRAME SUB
17	9-933-360-01	s BUTTON, 4MM
18	9-933-361-01	s BUTTON, EJ
19	9-909-934-01	o COUNTER PCB ASSY
20	9-933-362-01	o SPACER A
21	9-933-363-01	s BUTTON, SHTL
22	9-909-936-01	o METER PCB ASSY
23	9-909-931-01	o KEY PCB ASSY
24	9-933-364-01	o GASKET
31	9-933-386-01	s SCREW, TRUSS M 4x6 (BLK NI)
32	9-933-387-01	s SCREW, B.CT M 3x8 NI BLK
33	7-682-547-01	s SCREW +B 3x6
34	7-682-247-09	s SCREW +K 3x6
35	7-682-560-09	s SCREW +B 4x6
36	7-682-560-04	s SCREW +B 4x6
37	7-682-547-04	s SCREW +B 3x6
38	7-682-547-04	s SCREW +B 3x6
39	1-570-117-41	s SWITCH, SEESAW (AC POWER)
40	4-378-341-01	o COVER, SWITCH
41	9-909-946-01	o PCB ASSY, DIO
42	7-682-647-09	s SCREW +PS 3x6

EXPLODED VIEW-2, PCM-800

Exploded View-2, PCM-800

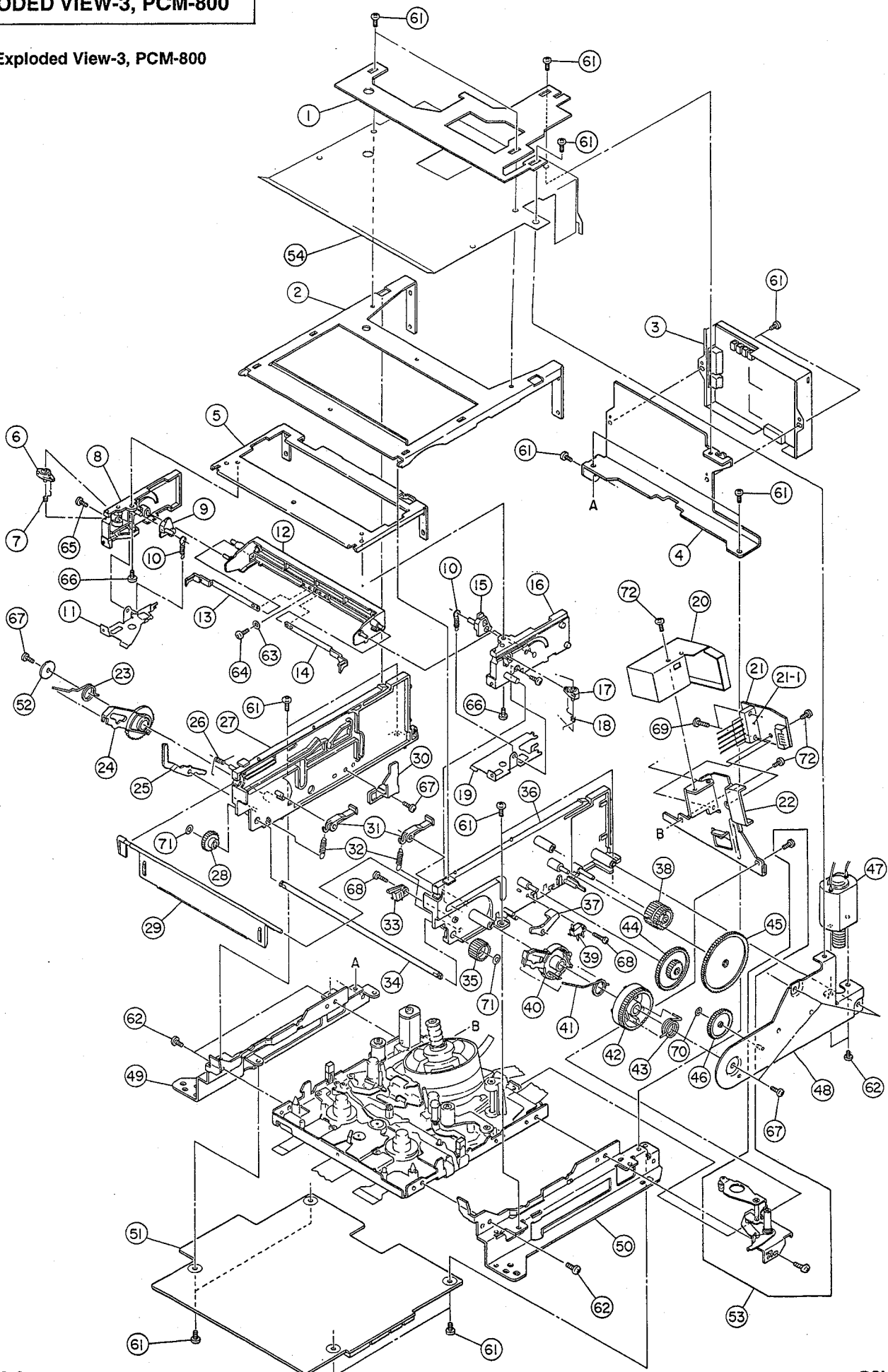


EXPLODED VIEW-2, PCM-800

No.	Part No.	SP Description
1	9-933-079-01	o CLAMP, FERRITE TRCC-16-8-13
2	△9-933-021-01	s AC INLET M1816
3	9-933-390-01	o REAR PANEL AC
4	9-933-391-01	o TUBE, INSULATOR
5	△9-933-112-01	s TRANSISTOR 2SD-313E Q2
6	9-933-392-01	o PLATE, INSULATION
7	9-933-393-01	o HEAT SINK A
8	△9-933-113-01	s TRANSISTOR, 2SB-507 Q1
9	9-933-170-01	o TR PCB
10	9-933-290-01	s C., ELEC. 100UF/16V M AS VT C2
11	9-933-171-01	o IC PCB
12	9-933-295-01	s C., METAL 0.33MF/50V J VT C1
13	△9-933-042-01	s IC LINEAR (STR9005) U1
14	△9-933-114-01	s TRANSISTOR, 2SB686 (O) Q3
16	9-909-932-01	o FILTER PCB ASSY
17	9-933-395-01	o POWER SW HOLDER
18	9-933-396-01	s RIVET, PUSH RP-3045-NB
19	9-909-935-01	o PSY PCB ASSY
20	9-933-107-01	o BRACKET, POWER SUPPLY PCB
21	9-933-397-01	o GUIDE, SUPPORT
22	9-933-398-01	o HOLDER, CORD
23	9-933-399-01	o GUIDE A
24	9-909-927-01	o MOTHER PCB ASSY
25	9-933-400-01	o PCB SUPPORT
26	9-933-401-01	o GUIDE B
27	9-933-093-01	s DC FAN MOTOR FBA08A12LZ
28	9-933-402-01	o BRACKET, FAN
29	9-909-938-01	o FUSE PCB ASSY (FOR UC)
	9-933-118-01	o FUSE PCB ASSY (FOR CE)
30	△9-933-014-01	s POWER TRANSFORMER
31	9-933-403-01	o PLATE, INSULATOR
32	9-933-404-01	o CHASSIS, MECHANISM
33	9-909-937-01	o REC/PLAY AMP PCB ASSY
34	9-933-405-01	o BRACKET, R/P BCB
35	9-933-406-01	o R/P PCB SUPPORT
36	9-933-407-01	o BRACKET, TRANSFORMER
37	9-933-408-01	o CHASSIS
38	9-933-409-01	o COLLAR, FOOT A
41	9-933-410-01	s SCREW, B. CT M 3×6 NI BLK
42	7-682-548-09	s SCREW +B 3×8
43	7-682-550-09	s SCREW +B 3×12
44	7-682-547-09	s SCREW +B 3×6
45	7-682-547-04	s SCREW +B 3×6
46	7-682-247-04	s SCREW +K 3×6
47	7-682-547-04	s SCREW +B 3×6
48	7-682-555-04	s SCREW +B 3×30
49	7-682-560-04	s SCREW +B 4×6
50	7-682-266-09	s SCREW +K 4×20

EXPLODED VIEW-3, PCM-800

Exploded View-3, PCM-800

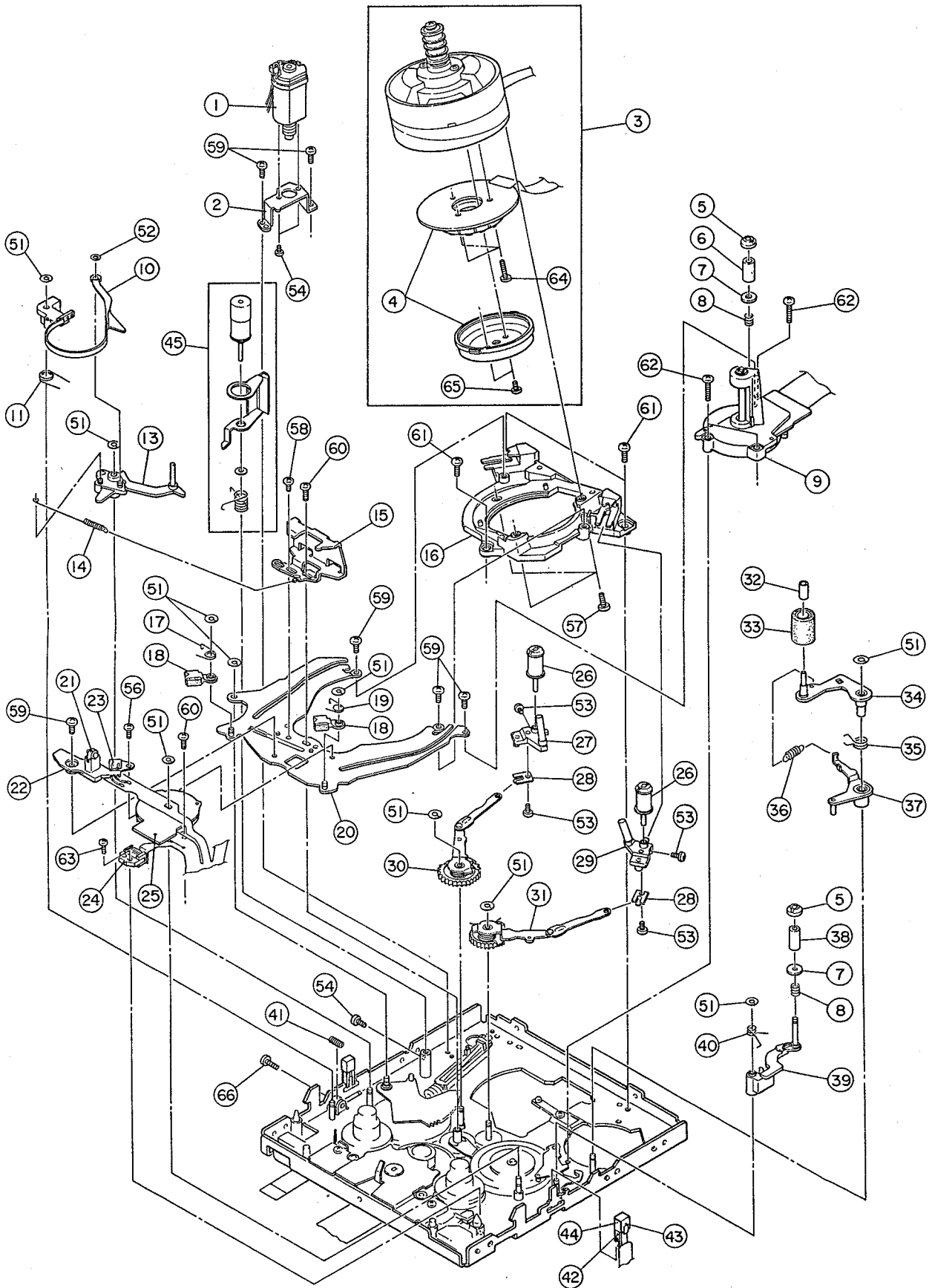


EXPLODED VIEW-3, PCM-800

No.	Part No.	SP Description	No.	Part No.	SP Description
1	9-933-411-01	o PLATE, SUPPORT	54	9-909-986-01	o SHIELD, MECHANISM (UC: S/N 20421 and higher) (EC: S/N 50001 and higher)
2	9-933-412-01	o BRACKET, CAM PLATE	61	9-933-667-01	s SCREW, BIND. HEAD M 2×4 NI
3	9-909-933-01	o RF AMP PCB ASSY	62	9-933-668-01	s SCREW, PAN(3) M 2×2.8 NI
4	9-933-413-01	o BRACKET, SHIELD RF	63	9-933-464-01	s WASHER, FLAT M 2×6×0.4T
5	9-933-414-01	o HOLDER, MAIN	64	9-933-669-01	s SCREW, BT PAN 3 M 1.6×4 W/O GUIDE NI
6	9-933-415-01	s LEVER L, CASSETTE PRESS	65	9-933-670-01	s SCREW, PAN 3 M 1.6×3 NI
7	9-933-416-01	s SPRING, COIL LLCP	66	9-933-671-01	s SCREW, PAN 3 M 1.6×2.5 NI
8	9-933-417-01	o BASE L, SLIDE	67	9-933-672-01	s SCREW, BT PAN 3 M 2×4 W/O GUIDE NI
9	9-933-418-01	s LEVER L, BRAKE	68	9-933-673-01	s SCREW, BT PAN 3 M 2×8 W/O GUIDE NI
10	9-933-419-01	s SPRING T, BRAKE	69	9-933-674-01	s SCREW, BIND M 2×6 (NI)
11	9-933-420-01	o SUB HOLDER L	70	9-933-465-01	s POLYSLIDER 1.7×4×0.25T CUT
12	9-933-421-01	o OPENER, LID	71	9-933-466-01	s POLYSLIDER 3.2×5.5×0.25T CUT
13	9-933-422-01	o LEVER L ASSY, LOCK	72	9-933-675-01	s SCREW, BIND M 2×3
14	9-933-423-01	o LEVER R ASSY, LOCK			
15	9-933-424-01	s LEVER R, BRAKE			
16	9-933-425-01	o BASE R, SLIDE			
17	9-933-426-01	s LEVER R, CASSETTE PRESS			
18	9-933-427-01	s SPRING, COIL LRCP			
19	9-933-428-01	o SUB HOLDER R			
20	9-933-429-01	o PLATE, SHIELD SR			
21	9-909-940-01	s BRUSH PCB ASSY			
21-1	9-933-105-01	s BRUSH RH			
22	9-933-430-01	o BRACKET, BRUSH			
23	9-933-431-01	s SPRING, COIL CPL			
24	9-933-432-01	s GEAR L, TRANSFER			
25	9-933-433-01	o LEVER, FRONT LID			
26	9-933-434-01	s SPRING, COIL LID			
27	9-933-435-01	o PLATE L, CAM			
28	9-933-436-01	s GEAR L, SYNCHRONIZE			
29	9-933-165-01	o DOOR, FRONT LID			
30	9-933-438-01	s CAM, LID OPENER			
31	9-933-439-01	s LEVER, LOCK			
32	9-933-440-01	s SPRING T, LOCK LEVER			
33	9-933-004-01	s SWITCH, PUSH SPPB21			
34	9-933-441-01	o SHAFT, SYNCHRONIZE			
35	9-933-442-01	s GEAR R, SYNCHRONIZE			
36	9-933-443-01	o PLATE R, CAM			
37	9-933-444-01	s LEVER, SWITCH			
38	9-933-445-01	s GEAR A, REDUCTION			
39	9-933-003-01	s SWITCH, PUSH SPPB12			
40	9-933-446-01	s GEAR R, TRANSFER			
41	9-933-447-01	s SPRING, COIL CPR			
42	9-933-448-01	s GEAR, RELEASE			
43	9-933-449-01	s SPRING, COIL GR			
44	9-933-450-01	s GEAR C, REDUCTION			
45	9-933-451-01	s GEAR B, REDUCTION			
46	9-933-452-01	s GEAR D, REDUCTION			
47	9-933-101-01	s MOTOR SUB ASSY, CASSETTE COMPARTMENT			
48	9-933-453-01	o BRACKET ASSY, C C MOTOR			
49	9-933-454-01	o BRACKET L, CHASSIS			
50	9-933-455-01	o BRACKET R, CHASSIS			
51	9-909-939-01	o SERVO PCB ASSY			
52	9-933-463-01	s PLATE, TRANSFER GEAR			
53	9-909-978-01	o CLEANING GUIDE KIT (The combination of 3-53 and 4-45 comprises a CLEANING GUIDE KIT.)			

EXPLODED VIEW-4, PCM-800

Exploded View-4, PCM-800

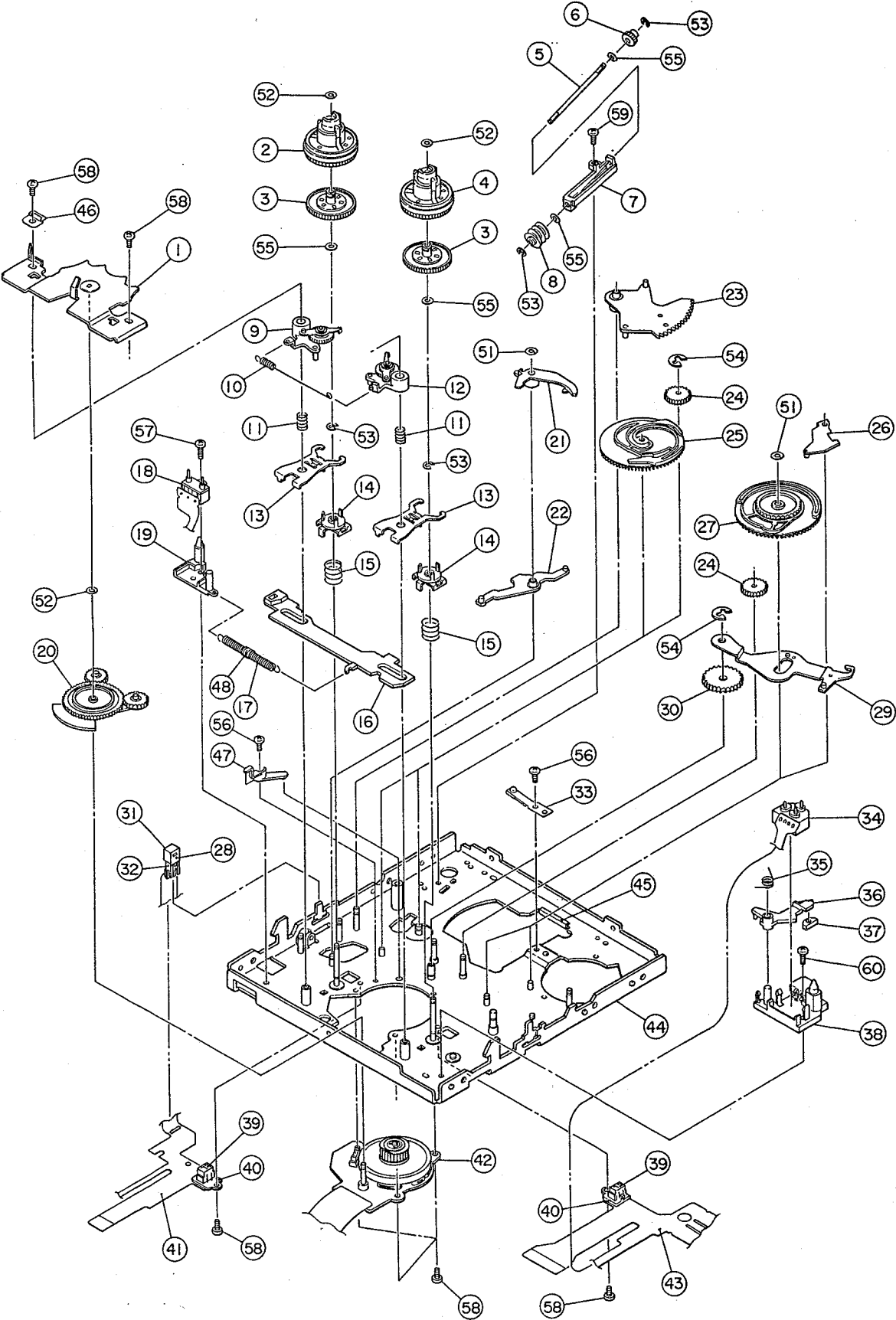


EXPLODED VIEW-4, PCM-800

No.	Part No.	SP Description	No.	Part No.	SP Description
1	9-933-109-01	s MOTOR ASSY, LOADING	57	9-933-568-01	s SCREW, PRE. PAN M 1.6×5.5
2	9-933-572-01	o BRACKET, LD MOTOR S	58	9-933-678-01	s SCREW, PRE. 3RD M 2×2
3	9-933-102-01	s DRUM ASSY	59	9-933-569-01	s SCREW, PRE. 3RD M 2×2.5
4	9-933-085-01	s MOTOR ASSY, DRUM	60	9-933-570-01	s SCREW, PRE. 3RD M 2×3.5
5	9-933-573-01	s FLANGE, NUT	61	9-933-571-01	s SCREW, PRE. 3RD M 2×5
6	9-933-574-01	s GUIDE, CAPSTAN	62	9-933-679-01	s SCREW, PRE. 3RD M 2×8
7	9-933-575-01	s FLANGE, GUIDE	63	9-933-680-01	s SCREW, TAP TIGHT ETP M 1.4×3.5
8	9-933-576-01	s SPRING C	64	9-933-359-01	s SCREW, PAN M 1.6×6.5
9	9-933-086-01	s MOTOR, CAPSTAN	65	9-933-360-01	s SCREW, PAN M 1.6×3.5
10	9-933-577-01	s BRAKE ASSY, BAND	66	9-933-361-01	s SCREW, PAN 3.2×4.5
11	9-933-578-01	s SPRING, COIL			
13	9-933-580-01	s LEVER ASSY, BACK TENSION			
14	9-933-581-01	s SPRING T			
15	9-933-582-01	o PLATE, PROTECTOR			
16	9-933-583-01	o BASE ASSY, DRUM			
17	9-933-584-01	s SPRING, COIL			
18	9-933-585-01	s LEVER ASSY, SOFT BRAKE			
19	9-933-584-01	s SPRING, COIL			
20	9-933-586-01	o PLATE ASSY, GUIDE RAIL			
21	9-909-991-01	s LED, PLT-462T3			
22	9-933-096-01	o BRACKET, LED			
23	9-909-981-01	s SENSOR, DEW HDP-07-C2			
24	9-933-080-01	s SOLENOID, LATCH 6V 2400HM			
25	9-933-110-01	s MODE SW ASSY			
26	9-933-587-01	s ROLLER ASSY, M GUIDE			
27	9-933-588-01	s SLIDE MGS ASSY			
28	9-933-589-01	o BRACKET MG			
29	9-933-590-01	s SLIDE MGT ASSY			
30	9-933-591-01	s LEVER ASSY, L THREAD			
31	9-933-592-01	s LEVER ASSY, R THREAD			
32	9-933-593-01	s SLEEVE, PINCH ROLLER			
33	9-933-594-01	s ROLLER ASSY, PINCH			
34	9-933-595-01	s LEVER ASSY, PINCH			
35	9-933-596-01	s SPRING, COIL			
36	9-933-597-01	s SPRING T			
37	9-933-598-01	o LINK ASSY, PINCH			
38	9-933-599-01	s GUIDE, FINAL			
39	9-933-600-01	o LEVER ASSY, GUIDE			
40	9-933-601-01	s SPRING, COIL			
41	9-933-602-01	s SPRING, C			
42	9-933-100-01	o HOLDER, TE SENSOR			
43	9-909-990-01	s PHOTO TRANSISTOR, RPM-20PB			
44	9-933-108-01	o PLATE, SLIT			
45	9-909-978-01	o CLEANING GUIDE KIT (The combination of 3-53 and 4-45 comprises a CLEANING GUIDE KIT.)			
51	9-933-467-01	s WASHER, SLIT 1.57×4×0.3			
52	9-933-468-01	s WASHER, SLIT 1.2×3×0.3			
53	9-933-676-01	s SCREW, PRE. PAN M 1.2×2.5			
54	9-933-677-01	s SCREW, PAN M 1.4×2			
56	9-933-567-01	s SCREW, PRE. PAN M 1.6×2			

EXPLODED VIEW-5, PCM-800

Exploded View-5, PCM-800

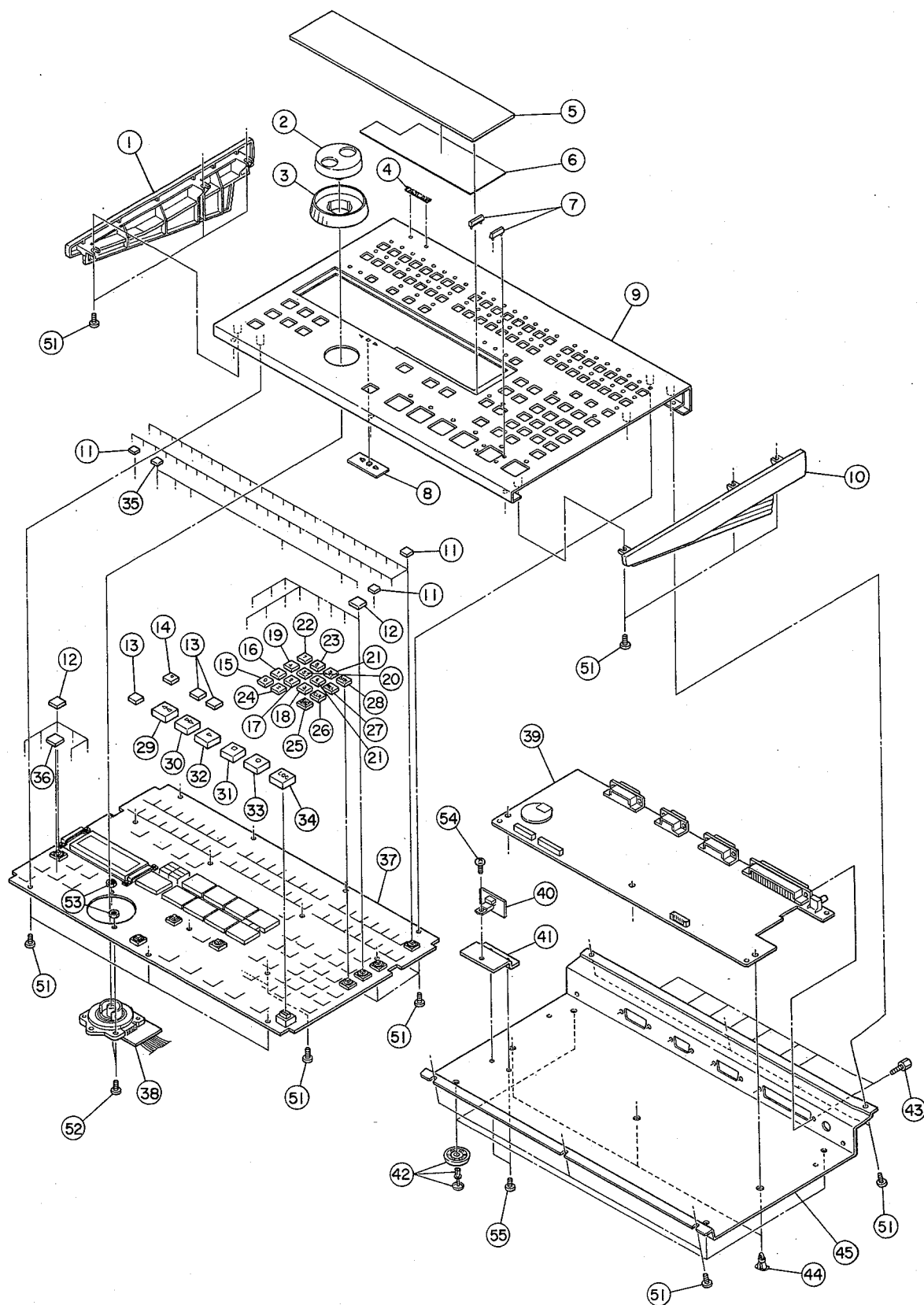


EXPLODED VIEW-5, PCM-800

No.	Part No.	SP Description
1	9-933-470-01 o	BRACKET, T OPENER
2	9-933-471-01 s	BASE ASSY, S REEL
3	9-933-472-01 s	DISC ASSY, REFLECTOR
4	9-933-473-01 s	BASE ASSY, T REEL
5	9-933-474-01 o	SHAFT, LORDING GEAR
6	9-933-475-01 s	WORM WHEEL, LORDING
7	9-933-476-01 o	BRACKET, GEAR
8	9-933-477-01 s	WORM, LORDING
9	9-933-478-01 s	S BRAKE ASSY
10	9-933-479-01 s	SPRING T
11	9-933-480-01 s	SPRING C
12	9-933-481-01 s	T BRAKE ASSY
13	9-933-482-01 o	LEVER, CLUTCH
14	9-933-483-01 s	CLUTCH ASSY
15	9-933-543-01 s	SPRING C
16	9-933-544-01 o	SLIDE, REEL OPERATING CAM
17	9-933-545-01 s	SPRING T
18	9-909-978-01 s	SWITCH, PUSH SPPW62
19	9-933-546-01 o	HOLDER, SWL
20	9-933-547-01 s	GEAR ASSY, CENTER
21	9-933-548-01 o	LEVER, REEL LOCK
22	9-933-549-01 o	LEVER ASSY, SLIDE
23	9-933-550-01 s	GEAR ASSY, SECTOR
24	9-933-551-01 s	GEAR B, COUPLING
25	9-933-552-01 s	CAM L, LOGIC
26	9-933-553-01 s	CAM FOLLOWER ASSY, PINCH
27	9-933-554-01 s	CAM R, LOGIC
28	9-933-108-01 o	PLATE, SLIT
29	9-933-555-01 o	LEVER ASSY, GUIDE CARRY
30	9-933-556-01 s	GEAR A, COUPLING
31	9-909-990-01 s	PHOTO TRANSISTOR, RPM-20PB
32	9-933-100-01 o	HOLDER, TE SENSOR
33	9-933-557-01 s	BRUSH ASSY
34	9-909-979-01 s	SWITCH, PUSH SW-101-2P
35	9-933-558-01 s	SPRING, COIL
36	9-933-559-01 o	LEVER, SLIDE KEEP
37	9-933-560-01 s	SOLENOID, LATCH MOVEMENT
38	9-933-561-01 o	HOLDER, SWR
39	9-909-992-01 s	PHOTO TRANSISTOR, NJL5165KC
40	9-933-099-01 o	HOLDER, REEL SENSOR
41	9-933-083-01 s	SENSOR L PCB
42	9-933-094-01 s	MOTOR, REEL DRX551
43	9-933-084-01 s	SENSOR R PCB
44	9-933-562-01 o	MECHANISM CHASSIS ASSY
45	9-933-563-01 o	EDGE GUARD, E0-12N
51	9-933-467-01 s	WASHER, SLIT 1.57×4×0.3
52	9-933-468-01 s	WASHER, SLIT 1.2×3×0.3
53	9-933-564-01 s	E RING 1.2J
54	9-933-565-01 s	E RING 2.5J
55	9-933-566-01 s	WASHER, POLYSLIDER D1.7
56	9-933-567-01 s	SCREW, PRE. PAN M 1.6×2
57	9-933-568-01 s	SCREW, PRE. PAN M 1.6×5.5
58	9-933-569-01 s	SCREW, PRE. 3RD M 2×2.5
59	9-933-570-01 s	SCREW, PRE. 3RD M 2×3.5
60	9-933-571-01 s	SCREW, PRE. 3RD M 2×5

EXPLODED VIEW, RM-D800

6-3. RM-D800 Exploded View
Exploded View, RM-D800



EXPLODED VIEW, RM-D800

No.	Part No.	SP Description
1	9-933-494-01	o PANEL (L), SIDE
2	9-933-495-01	s JOG DIAL
3	9-933-496-01	s SHUTTLE DIAL
4	3-718-322-02	o EMBLEM, SONY
5	9-933-497-01	o LENS, COUNTER
6	9-933-498-01	o LED FILTER
7	9-933-499-01	o ESCUTCHEON GUARD
8	9-933-500-01	o LENS, DIRECTION
9	9-933-501-01	o FRONT PANEL ASSY RM-D800
10	9-933-502-01	o PANEL (R), SIDE
11	9-933-503-01	s BUTTON W (8*8)
12	9-933-504-01	s BUTTON 10*10 DGO
13	9-933-505-01	s BUTTON 10*10 C
14	9-933-506-01	s BUTTON, LOAD
15	9-933-507-01	s BUTTON 0
16	9-933-508-01	s BUTTON 1
17	9-933-509-01	s BUTTON 2
18	9-933-510-01	s BUTTON 3
19	9-933-511-01	s BUTTON 4
20	9-933-512-01	s BUTTON 5
21	9-933-513-01	s BUTTON 6
22	9-933-514-01	s BUTTON 7
23	9-933-515-01	s BUTTON 8
24	9-933-516-01	s BUTTON +/-
25	9-933-517-01	s BUTTON CUE
26	9-933-518-01	s BUTTON CLEAR
27	9-933-519-01	s BUTTON RCL
28	9-933-520-01	s BUTTON STR
29	9-933-521-01	s BUTTON S REW
30	9-933-522-01	s BUTTON S FF
31	9-933-523-01	s BUTTON S. STOP
32	9-933-524-01	s BUTTON S. PLAY
33	9-933-525-01	s BUTTON S. REC
34	9-933-526-01	s BUTTON S. LOC
35	9-933-527-01	s BUTTON 8*8 DG
36	9-933-528-01	s BUTTON SHIFT
37	9-909-949-01	o OPERATION PCB ASSY
38	9-909-951-01	o JOG PCB ASSY
39	9-909-948-01	o CONTROL PCB ASSY
40	9-909-950-01	o V-REG PCB ASSY
41	9-933-529-01	o HEAT SINK
42	9-933-530-01	o FOOT
43	9-933-603-01	s D SUB LOCK SCREW M 2.6x0.45
44	9-933-531-01	o PCB SUPPORT RSPLS-6L L TYPE
45	9-933-532-01	o BOTTOM PANEL, RM-D800
51	7-682-547-04	s SCREW +B 3x6
52	7-682-548-04	s SCREW +B 3x8
53	7-684-023-04	s N 3, TYPE 2
54	7-682-549-04	s SCREW B +3x10
55	7-682-547-04	s SCREW B +3x6

6-4. Electrical Parts List

6-4-1. PCM-800

A/D PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-929-01	o A/D PCB ASSY (This assembly includes the following parts.)
16pcs	7-621-559-30	s SCREW +K 2.6X5
5pcs	7-682-547-04	s SCREW +B 3X6
2pcs	7-682-548-04	s SCREW +B 3X8
2pcs	9-933-616-01	o HEAT SINK
2pcs	9-933-617-01	o PLATE, GND
1pc	9-933-618-01	o REAR PANEL, A/D
1pc	9-933-619-01	o SHIELD PLATE, A/D
C1	Pending	ELECT 220uF 16V
C2	Pending	ELECT 220uF 16V
C3	1-164-159-11	s CERAMIC 0.1uF 50V
C4	1-164-159-11	s CERAMIC 0.1uF 50V
C5	Pending	ELECT 47uF 10V
C6	1-164-159-11	s CERAMIC 0.1uF 50V to C11
C001	Pending	ELECT 22uF 25V to C008
C011	Pending	ELECT 22uF 25V to C018
C021	1-102-973-00	s CERAMIC 100PF 5% 50V to C028
C031	1-102-973-00	s CERAMIC 100PF 5% 50V to C038
C051	Pending	ELECT 22uF 25V to C058
C061	Pending	ELECT 22uF 25V to C068
C101	Pending	CAPACITOR 680PF 100V to C108
C111	1-102-973-00	s CERAMIC 100PF 5% 50V to C118
C121	Pending	ELECT 22uF 25V to C128
C131	Pending	METAL 0.01uF 50V to C138
C141	Pending	METAL 0.01uF 50V to C148
C151	Pending	MYLAR 0.0082uF 50V to C158
C401	Pending	ELECT 10uF 25V
C402	Pending	ELECT 10uF 25V
C403	Pending	ELECT 10uF 25V
C404	Pending	ELECT 10uF 25V
C411	Pending	ELECT 10uF 25V
C412	Pending	ELECT 10uF 25V
C413	Pending	ELECT 10uF 25V
C414	Pending	ELECT 10uF 25V
C421	1-164-159-11	s CERAMIC 0.1uF 50V
C422	1-164-159-11	s CERAMIC 0.1uF 50V
C423	1-164-159-11	s CERAMIC 0.1uF 50V

(A/D PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
C424	1-164-159-11	s CERAMIC 0.1uF 50V
C431	1-164-159-11	s CERAMIC 0.1uF 50V
C432	1-164-159-11	s CERAMIC 0.1uF 50V
C433	1-164-159-11	s CERAMIC 0.1uF 50V
C434	1-164-159-11	s CERAMIC 0.1uF 50V
C441	1-164-159-11	s CERAMIC 0.1uF 50V
C442	1-164-159-11	s CERAMIC 0.1uF 50V
C443	1-164-159-11	s CERAMIC 0.1uF 50V
C444	1-164-159-11	s CERAMIC 0.1uF 50V
C451	Pending	ELECT 10uF 25V
C452	Pending	ELECT 10uF 25V
C453	Pending	ELECT 10uF 25V
C454	Pending	ELECT 10uF 25V
C461	1-164-159-11	s CERAMIC 0.1uF 50V
C462	1-164-159-11	s CERAMIC 0.1uF 50V
C463	1-164-159-11	s CERAMIC 0.1uF 50V
C464	1-164-159-11	s CERAMIC 0.1uF 50V
C471	Pending	ELECT 10uF 25V
C472	Pending	ELECT 10uF 25V
C473	Pending	ELECT 10uF 25V
C474	Pending	ELECT 10uF 25V
C481	1-164-159-11	s CERAMIC 0.1uF 50V
C482	1-164-159-11	s CERAMIC 0.1uF 50V
C483	1-164-159-11	s CERAMIC 0.1uF 50V
C484	1-164-159-11	s CERAMIC 0.1uF 50V
C491	1-164-159-11	s CERAMIC 0.1uF 50V
C492	1-164-159-11	s CERAMIC 0.1uF 50V
C493	1-164-159-11	s CERAMIC 0.1uF 50V
C494	1-164-159-11	s CERAMIC 0.1uF 50V
D001	8-719-901-33	s DIODE 1SS133T to D008
D011	8-719-901-33	s DIODE 1SS133T to D018
J1	9-933-121-01	s CONNECTOR, CRUMP (For XLR 3P) to J8
J1	9-933-146-01	s CONNECTOR, XLR 3P, FEMALE to J8
P100	9-933-025-01	o CONNECTOR, 100P, PLUG
Q1	8-729-900-36	s TRANSISTOR DTC124ES
Q2	8-729-900-63	s TRANSISTOR DTA124ES
Q001	8-729-231-55	s TRANSISTOR 2SC2878-AB to Q008
R1	Pending	CARBON 4.7K
R2	Pending	CARBON 4.7K
R3	Pending	CARBON 56K
R001	1-215-438-00	s METAL 5.1K 1% 1/4W to R008
R011	1-215-438-00	s METAL 5.1K 1% 1/4W to R018
R021	1-215-424-00	s METAL 1.3K 1% 1/4W to R028
R031	1-215-424-00	s METAL 1.3K 1% 1/4W to R038

(A/D PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R041 to 048	Pending	CARBON 24
R051 to 058	Pending	CARBON 24
R071 to 078	Pending	CARBON 220
R091 to R098	1-215-439-00 s	METAL 5.6K 1% 1/4W
R101 to R108	1-215-451-00 s	METAL 18K 1% 1/4W
R111 to R118	Pending	CARBON 390
R121 to R128	Pending	CARBON 4.7K
R131 to R138	Pending	CARBON 390K
R141 to R148	Pending	CARBON 43
R151 to R158	Pending	CARBON 4.7K
R171 to R178	1-215-427-00 s	METAL 1.8K 1% 1/4W
R181 to R188	Pending	CARBON 12K
R191 to R198	Pending	CARBON 1.8M
R201 to R208	Pending	CARBON 18
R211 to R218	Pending	CARBON 100K
R221 to R228	Pending	CARBON 100K
R401	△ 9-933-394-01 s	CARBON 10
R402	△ 9-933-394-01 s	CARBON 10
R403	△ 9-933-394-01 s	CARBON 10
R404	△ 9-933-394-01 s	CARBON 10
R411	Pending	CARBON 100
R412	Pending	CARBON 100
R413	Pending	CARBON 100
R414	Pending	CARBON 100
R421	Pending	CARBON 100
R422	Pending	CARBON 100
R423	Pending	CARBON 100
R424	Pending	CARBON 100
R431	Pending	CARBON 100
R432	Pending	CARBON 100
R433	Pending	CARBON 100
R434	Pending	CARBON 100
R441	Pending	CARBON 100
R442	Pending	CARBON 100
R443	Pending	CARBON 100

(A/D PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R444	Pending	CARBON 100
R451	Pending	CARBON 22
R452	Pending	CARBON 22
R453	Pending	CARBON 22
R454	Pending	CARBON 22
U1	△ 9-933-043-01 s	IC NJM7805FA
U2	△ 9-933-044-01 s	IC NJM7905FA
U3	9-933-208-01 s	IC HD74HC244P
U001 to U008	9-933-223-01 s	IC NJM2114L
U401	8-759-504-36 s	IC CS5339-KP
U402	8-759-504-36 s	IC CS5339-KP
U403	8-759-504-36 s	IC CS5339-KP
U404	8-759-504-36 s	IC CS5339-KP
U411	9-909-983-01 s	EMI FILTER
U412	9-909-983-01 s	EMI FILTER
U413	9-909-983-01 s	EMI FILTER
U414	9-909-983-01 s	EMI FILTER
U421	9-909-983-01 s	EMI FILTER
U422	9-909-983-01 s	EMI FILTER
U423	9-909-983-01 s	EMI FILTER
U424	9-909-983-01 s	EMI FILTER
U431	9-909-983-01 s	EMI FILTER
U432	9-909-983-01 s	EMI FILTER
U433	9-909-983-01 s	EMI FILTER
U434	9-909-983-01 s	EMI FILTER

COUNTER PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-934-01 o	COUNTER PCB ASSY (This assembly includes the following parts.)
D401	9-933-267-01 s	LED LB-302DF
D402	9-933-267-01 s	LED LB-302DF
D403	9-933-267-01 s	LED LB-302DF
D404	9-933-267-01 s	LED LB-302DF
P20	9-933-060-01 o	CONNECTOR, 8P, SOCKET
P21	9-933-060-01 o	CONNECTOR, 8P, SOCKET

D/A PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-930-01 o	D/A PCB ASSY (This assembly includes the following parts.)
16pcs	7-621-559-30 s	SCREW +K 2.6X5
3pcs	7-682-547-04 s	SCREW +B 3X6
2pcs	9-933-617-01 o	PLATE, GND
1pc	9-933-619-01 o	SHIELD PLATE, A/D
1pc	9-933-620-01 o	REAR PANEL, D/A
C1	Pending	ELECT 47uF 10V
C2	1-164-159-11 s	CERAMIC 0.1uF 50V
C3	1-164-159-11 s	CERAMIC 0.1uF 50V
C4	1-164-159-11 s	CERAMIC 0.1uF 50V
C5	Pending	ELECT 220uF 16V
C6	Pending	ELECT 220uF 16V
C7	1-164-159-11 s	CERAMIC 0.1uF 50V
C8	1-164-159-11 s	CERAMIC 0.1uF 50V
C9	1-164-159-11 s	CERAMIC 0.1uF 50V
C001	Pending	MYLAR 0.0033uF 50V to C008
C011	Pending	CAPACITOR 360PF 100V to C018
C021	1-102-954-00 s	CERAMIC 10PF 50V to C028
C031	Pending	ELECT 22uF 25V to C038
C051	Pending	METAL 0.1uF 50V to C058
C081	Pending	ELECT 22uF 25V to C088
C091	Pending	ELECT 22uF 25V to C098
C101	Pending	ELECT 22uF 25V to C108
C111	1-102-961-41 s	CERAMIC 27PF 5% 50V to C118
C121	1-102-961-41 s	CERAMIC 27PF 5% 50V to C128
C131	1-102-961-41 s	CERAMIC 27PF 5% 50V to C138
C141	1-102-961-41 s	CERAMIC 27PF 5% 50V to C148
C151	Pending	ELECT 220uF 16V to C158
C161	Pending	ELECT 220uF 16V to C168
C171	Pending	ELECT 22uF 25V to C178
C181	Pending	ELECT 22uF 25V to C188
C211	Pending	MYLAR 0.0015uF 50V to C218

(D/A PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
C221	Pending	MYLAR 0.0036uF 50V to C228
C401	Pending	ELECT 10uF 25V
C402	Pending	ELECT 10uF 25V
C403	Pending	ELECT 10uF 25V
C404	Pending	ELECT 10uF 25V
C411	1-164-159-11 s	CERAMIC 0.1uF 50V
C412	1-164-159-11 s	CERAMIC 0.1uF 50V
C413	1-164-159-11 s	CERAMIC 0.1uF 50V
C414	1-164-159-11 s	CERAMIC 0.1uF 50V
C421	Pending	ELECT 10uF 25V
C422	Pending	ELECT 10uF 25V
C423	Pending	ELECT 10uF 25V
C424	Pending	ELECT 10uF 25V
C431	1-164-159-11 s	CERAMIC 0.1uF 50V
C432	1-164-159-11 s	CERAMIC 0.1uF 50V
C433	1-164-159-11 s	CERAMIC 0.1uF 50V
C434	1-164-159-11 s	CERAMIC 0.1uF 50V
C441	Pending	ELECT 10uF 25V
C442	Pending	ELECT 10uF 25V
C443	Pending	ELECT 10uF 25V
C444	Pending	ELECT 10uF 25V
C451	Pending	ELECT 10uF 25V
C452	Pending	ELECT 10uF 25V
C453	Pending	ELECT 10uF 25V
C454	Pending	ELECT 10uF 25V
C461	1-164-159-11 s	CERAMIC 0.1uF 50V
C462	1-164-159-11 s	CERAMIC 0.1uF 50V
C463	1-164-159-11 s	CERAMIC 0.1uF 50V
C464	1-164-159-11 s	CERAMIC 0.1uF 50V
C471	1-164-159-11 s	CERAMIC 0.1uF 50V
C472	1-164-159-11 s	CERAMIC 0.1uF 50V
C473	1-164-159-11 s	CERAMIC 0.1uF 50V
C474	1-164-159-11 s	CERAMIC 0.1uF 50V
P1	9-933-147-01 s	CONNECTOR, XLR 3P, MALE to P8
P100	9-933-025-01 o	CONNECTOR, 100P, PLUG
Q1	8-729-900-63 s	TRANSISTOR DTA124ES
Q3	8-729-900-63 s	TRANSISTOR DTA124ES
Q2	8-729-900-36 s	TRANSISTOR DTC124ES
Q4	8-729-900-36 s	TRANSISTOR DTC124ES
Q001	9-933-275-01 s	TRANSISTOR 2SC2878-B to Q008
Q011	9-933-277-01 s	TRANSISTOR 2SK381 to Q018
R1	Pending	CARBON 4.7K to R5
R6	Pending	CARBON 56K
R001	1-215-439-00 s	METAL 5.6K 1% 1/4W to R008
R011	1-215-433-00 s	METAL 3.3K 1% 1/4W to R018
R021	1-215-439-00 s	METAL 5.6K 1% 1/4W to R028

(D/A PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R041 to R048	1-215-445-00 s	METAL 10K 1% 1/4W
R051 to R058	1-215-445-00 s	METAL 10K 1% 1/4W
R061 to R068	Pending	CARBON 150
R081 to R088	Pending	CARBON 3.9K
R091 to R098	Pending	CARBON 56K
R101 to R108	Pending	CARBON 75
R111 to R118	Pending	CARBON 75
R151 to R158	1-215-435-00 s	METAL 3.9K 1% 1/4W
R161 to R168	Pending	CARBON 10M
R171 to R178	Pending	CARBON 240
R181 to R188	Pending	CARBON 360K
R301 to R308	9-933-286-01 s	RESISTOR BLOCK
R401	Pending	CARBON 100
R402	Pending	CARBON 100
R403	Pending	CARBON 100
R404	Pending	CARBON 100
R411	Pending	CARBON 100
R412	Pending	CARBON 100
R413	Pending	CARBON 100
R414	Pending	CARBON 100
R421	Pending	CARBON 100
R422	Pending	CARBON 100
R423	Pending	CARBON 100
R424	Pending	CARBON 100
R431	Pending	CARBON 100
R432	Pending	CARBON 100
R433	Pending	CARBON 100
R434	Pending	CARBON 100
R441	Pending	CARBON 100
R442	Pending	CARBON 100
R443	Pending	CARBON 100
R444	Pending	CARBON 100
R451	Pending	CARBON 100
R452	Pending	CARBON 100
R453	Pending	CARBON 100
R454	Pending	CARBON 100
R461	Pending	CARBON 100
R462	Pending	CARBON 100
R463	Pending	CARBON 100
R464	Pending	CARBON 100
R471	Pending	CARBON 100

(D/A PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R472	Pending	CARBON 100
R473	Pending	CARBON 100
R474	Pending	CARBON 100
U1	9-933-187-01 s	IC HD74HC02P
U001 to U008	8-759-712-03 s	IC NJM2114L
U011 to U018	8-759-712-03 s	IC NJM2114L
U401	9-933-127-01 s	IC SM5840EP
U402	9-933-127-01 s	IC SM5840EP
U403	9-933-127-01 s	IC SM5840EP
U404	9-933-127-01 s	IC SM5840EP
U411	9-933-225-01 s	IC AD1865N
U412	9-933-225-01 s	IC AD1865N
U413	9-933-225-01 s	IC AD1865N
U414	9-933-225-01 s	IC AD1865N
U421	9-909-983-01 s	EMI FILTER
U422	9-909-983-01 s	EMI FILTER
U423	9-909-983-01 s	EMI FILTER
U424	9-909-983-01 s	EMI FILTER
U431	9-909-983-01 s	EMI FILTER
U432	9-909-983-01 s	EMI FILTER
U433	9-909-983-01 s	EMI FILTER
U434	9-909-983-01 s	EMI FILTER

DIO IF PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-946-01	o DIO IF PCB ASSY (This assembly includes the following parts.)
C101	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C102	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C103	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C104	1-130-491-00	s MYLAR 0.047uF 5% 50V
C105	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C106	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C107	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C108	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C109	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V
C110	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C111	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V
C112	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C113	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C114	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C115	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C201	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C202	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C203	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C204	1-130-491-00	s MYLAR 0.047uF 5% 50V
C205	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C206	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C207	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C208	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C209	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V
C210	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C211	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V
C212	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C213	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C214	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C215	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C301	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C302	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C303	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C304	1-130-491-00	s MYLAR 0.047uF 5% 50V
C305	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C306	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C307	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C308	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C309	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V
C310	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C311	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V
C312	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C313	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C314	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C315	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C401	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C402	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C403	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C404	1-130-491-00	s MYLAR 0.047uF 5% 50V
C405	1-164-346-11	s CERAMIC, CHIP 1uF 16V
C406	1-126-204-11	s ELECT, CHIP 47uF 20% 16V
C407	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C408	1-164-505-11	s CERAMIC, CHIP 2.2uF 16V
C409	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V
C410	1-163-251-11	s CERAMIC, CHIP 100PF 5% 50V
C411	1-163-275-11	s CERAMIC, CHIP 0.001uF 50V

(DIO IF PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
C412	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C413	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C414	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C415	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C501	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C601	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C701	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C801	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C901	1-136-169-00	s FILM 0.22uF 5% 50V to C908
C909	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C910	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C911	1-126-206-11	s ELECT, CHIP 100uF 20% 6.3V
C912	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C913	1-136-169-00	s FILM 0.22uF 5% 50V to C920
C921	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C922	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V to C944
CN1	9-933-989-01	s CONNECTOR, 25P, SOCKET
CN2	9-933-990-01	s CONNECTOR, D-SUB 25P
CN3	9-933-991-01	o CONNECTOR, 5P, PLUG
CN4	9-933-992-01	o CONNECTOR, 8P, PLUG
CN5	9-933-993-01	o CONNECTOR, 9P, PLUG
CN6	9-933-994-01	o CONNECTOR, 2P, PLUG
CN7	9-933-995-01	s CONNECTOR, 2P
D101	8-719-049-03	s DIODE KV1851A-1
D201	8-719-049-03	s DIODE KV1851A-1
D301	8-719-049-03	s DIODE KV1851A-1
D401	8-719-049-03	s DIODE KV1851A-1
D901	8-719-908-30	s DIODE DA106K to D916
D917	9-933-263-01	s LED SLR-34VR3F, RED
D918	9-933-263-01	s LED SLR-34VR3F, RED
D919	9-933-263-01	s LED SLR-34VR3F, RED
D920	9-933-263-01	s LED SLR-34VR3F, RED
D921	8-719-908-30	s DIODE DA106K to D936
FB1	9-933-987-01	s BEAD CORE to FB24
FL101	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
FL102	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
FL201	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
FL202	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
FL301	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
FL302	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
FL401	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
FL401	1-424-008-11	s FILTER, NOISE (SIGNAL LINE)
IC101	8-752-306-51	s IC CX23065A
IC102	8-759-970-59	s IC TLC272CPS
IC103	8-759-233-64	s IC TC74HC04AF
IC104	8-759-069-38	s IC CXD8278AQ
IC201	8-752-306-51	s IC CX23065A
IC202	8-759-970-59	s IC TLC272CPS
IC203	8-759-233-64	s IC TC74HC04AF
IC204	8-759-069-38	s IC CXD8278AQ

(DIO IF PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
IC301	8-752-306-51 s	IC CX23065A
IC302	8-759-970-59 s	IC TLC272CPS
IC303	8-759-233-64 s	IC TC74HC04AF
IC304	8-759-069-38 s	IC CXD8278AQ
IC401	8-752-306-51 s	IC CX23065A
IC402	8-759-970-59 s	IC TLC272CPS
IC403	8-759-233-64 s	IC TC74HC04AF
IC404	8-759-069-38 s	IC CXD8278AQ
IC501	8-759-062-88 s	IC CXD8277Q
IC601	8-759-062-88 s	IC CXD8277Q
IC701	8-759-062-88 s	IC CXD8277Q
IC801	8-759-062-88 s	IC CXD8277Q
IC901	9-933-979-01 s	IC HD26LS32P
IC902	8-759-235-14 s	IC TC74HC04AF-TP2
IC903	8-759-032-14 s	IC MC74HC08AF
IC904	8-759-239-23 s	IC TC74HC86AF
IC905	8-759-235-06 s	IC TC74HC02AF-TP2
IC906	8-759-239-23 s	IC TC74HC86AF
IC907	8-759-239-23 s	IC TC74HC86AF
IC908	8-759-239-23 s	IC TC74HC86AF
IC909	9-933-981-01 s	IC SN74HC27F
IC910	9-933-981-01 s	IC SN74HC27F
IC911	8-759-032-14 s	IC MC74HC08AF
IC912	8-759-236-19 s	IC TC74HC151AF
IC913	9-933-998-01 s	IC HD74HC153FPEL
IC914	9-933-998-01 s	IC HD74HC153FPEL
IC915	9-933-998-01 s	IC HD74HC153FPEL
IC916	8-759-304-55 s	IC HD74HC74FP
IC917	9-933-982-01 s	IC SN74S14ONS
IC918	8-759-032-20 s	IC MC74HC32AF
IC919	8-759-235-14 s	IC TC74HC04AF-TP2
IC920	9-933-983-01 s	IC HD74HC540FPEL
IC921	8-759-235-14 s	IC TC74HC04AF-TP2
IC922	8-759-304-55 s	IC HD74HC74FP
IC923	8-759-232-02 s	IC TC74HC00AF
IC924	8-759-304-55 s	IC HD74HC74FP
IC925	9-933-984-01 s	IC HD26LS31P
L101	1-408-768-21 s	INDUCTOR, CHIP 1.8uH
L201	1-408-768-21 s	INDUCTOR, CHIP 1.8uH
L301	1-408-768-21 s	INDUCTOR, CHIP 1.8uH
L401	1-408-768-21 s	INDUCTOR, CHIP 1.8uH
L901	9-933-988-01 s	INDUCTOR, CHIP 72uH
R101	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R102	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R103	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R104	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R105	1-216-055-00 s	METAL, CHIP 1.8K 5% 1/10W
R106	1-216-077-00 s	METAL, CHIP 15K 5% 1/10W
R107	1-216-049-00 s	METAL, CHIP 1.0K 5% 1/10W
R108	1-216-097-00 s	METAL, CHIP 100K 5% 1/10W
R201	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R202	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R203	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R204	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R205	1-216-055-00 s	METAL, CHIP 1.8K 5% 1/10W
R206	1-216-077-00 s	METAL, CHIP 15K 5% 1/10W
R207	1-216-049-00 s	METAL, CHIP 1.0K 5% 1/10W
R208	1-216-097-00 s	METAL, CHIP 100K 5% 1/10W

(DIO IF PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R301	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R302	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R303	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R304	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R305	1-216-055-00 s	METAL, CHIP 1.8K 5% 1/10W
R306	1-216-077-00 s	METAL, CHIP 15K 5% 1/10W
R307	1-216-049-00 s	METAL, CHIP 1.0K 5% 1/10W
R308	1-216-097-00 s	METAL, CHIP 100K 5% 1/10W
R401	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R402	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
R403	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R404	1-216-067-00 s	METAL, CHIP 5.6K 5% 1/10W
R405	1-216-055-00 s	METAL, CHIP 1.8K 5% 1/10W
R406	1-216-077-00 s	METAL, CHIP 15K 5% 1/10W
R407	1-216-049-00 s	METAL, CHIP 1.0K 5% 1/10W
R408	1-216-097-00 s	METAL, CHIP 100K 5% 1/10W
R901	1-216-628-11 s	METAL, CHIP 110 5% 1/10W
R902	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R903	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R904	1-216-628-11 s	METAL, CHIP 110 5% 1/10W
R905	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R906	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R907	1-216-628-11 s	METAL, CHIP 110 5% 1/10W
R908	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R909	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R910	1-216-628-11 s	METAL, CHIP 110 5% 1/10W
R911	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R912	1-216-025-00 s	METAL, CHIP 100 5% 1/10W
R913	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R914	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R915	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R916	1-216-033-00 s	METAL, CHIP 220 5% 1/10W
R917	1-216-057-00 s	METAL, CHIP 2.2K 5% 1/10W
to R921		
R922	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
to R929		
R930	1-216-615-11 s	METAL, CHIP 33 5% 1/10W
to R937		
R938	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
R939	1-216-073-00 s	METAL, CHIP 10K 5% 1/10W
S1	9-933-996-01 s	SWITCH, DIP 8-CKT
T901	1-437-194-21 s	TRANSFORMER, PULSE
to T908		

DSP PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-947-01	o DSP PCB ASSY (This assembly includes the following parts.)
6pcs	7-682-547-01	s SCREW +B 3X6
2pcs	9-933-082-01	o COLLAR, AES
1pc	9-933-134-01	o REAR PANEL, AES
1pc	9-933-135-01	o SHIELD PLATE, AES
6pcs	9-933-370-01	s SCREW M2.6X0.45 (For D-SUB)
C1	1-128-065-11	s ELECT, CHIP 68uF 20% 10V
C2	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
to C32		
C33	1-126-203-11	s ELECT, CHIP 33uF 20% 25V
D1	9-909-989-01	s DIODE DA119
D2	9-909-989-01	s DIODE DA119
D3	8-719-951-22	s DIODE 1M10
to D18		
J3	9-933-027-01	s CONNECTOR, D-SUB 15P, SOCKET
J4	9-933-023-01	s CONNECTOR, BNC, SOCKET
P1	9-933-025-01	o CONNECTOR, 100P, PLUG
P2	9-933-036-01	o CONNECTOR, 2P, PLUG
P3	9-933-034-01	o CONNECTOR, 9P, PLUG
P4	9-933-033-01	o CONNECTOR, 8P, PLUG
P5	9-933-032-01	o CONNECTOR, 5P, PLUG
R1	9-933-167-01	s RESISTOR BLOCK, CHIP 2.2KX8
R2	9-933-168-01	s RESISTOR BLOCK, CHIP 4.7KX8
R3	9-933-167-01	s RESISTOR BLOCK, CHIP 2.2KX8
R4	9-933-168-01	s RESISTOR BLOCK, CHIP 4.7KX8
R5	9-933-167-01	s RESISTOR BLOCK, CHIP 2.2KX8
R6	9-933-168-01	s RESISTOR BLOCK, CHIP 4.7KX8
R7	9-933-167-01	s RESISTOR BLOCK, CHIP 2.2KX8
R8	9-933-168-01	s RESISTOR BLOCK, CHIP 4.7KX8
R9	9-933-167-01	s RESISTOR BLOCK, CHIP 2.2KX8
R10	9-933-168-01	s RESISTOR BLOCK, CHIP 4.7KX8
R11	9-933-169-01	s RESISTOR BLOCK, 47X8
R12	9-933-169-01	s RESISTOR BLOCK, 47X8
R13	9-933-169-01	s RESISTOR BLOCK, 47X8
R14	9-933-169-01	s RESISTOR BLOCK, 47X8
R15	9-933-167-01	s RESISTOR BLOCK, CHIP 2.2KX8
R16	9-933-168-01	s RESISTOR BLOCK, CHIP 4.7KX8
R17	9-933-169-01	s RESISTOR BLOCK, 47X8
R18	9-933-169-01	s RESISTOR BLOCK, 47X8
R19	9-933-169-01	s RESISTOR BLOCK, 47X8
R20	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R21	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R22	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R23	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R24	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R25	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R26	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R29	1-216-017-00	s METAL, CHIP 47 5% 1/10W
to R34		
R35	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R36	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R37	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R38	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R39	1-216-017-00	s METAL, CHIP 47 5% 1/10W

(DSP PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R40	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R41	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R42	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R43	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R44	9-933-168-01	s RESISTOR BLOCK, CHIP 4.7KX8
R45	1-216-017-00	s METAL, CHIP 47 5% 1/10W
to R76		
R77	1-216-033-00	s METAL, CHIP 220 5% 1/10W
to R104		
R105	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R106	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R107	1-216-017-00	s METAL, CHIP 47 5% 1/10W
U1	9-933-199-01	s IC MB89255A-PFS
U2	8-759-032-20	s IC MC74HC32AF
U3	9-933-176-01	s IC HD74HC138FP
U4	9-933-195-01	s IC HD74HC597FP
U5	9-933-195-01	s IC HD74HC597FP
U6	9-933-148-01	s IC HD74HC541FPPEL
U7	9-933-148-01	s IC HD74HC541FPPEL
U8	9-933-148-01	s IC HD74HC541FPPEL
U9	8-759-032-53	s IC MC74HC244AF
U10	8-759-032-53	s IC MC74HC244AF
U11	8-759-032-53	s IC MC74HC244AF
U12	8-759-032-53	s IC MC74HC244AF
U13	9-933-156-01	s IC MC74HC14AF
U14	9-933-983-01	s IC HD74HC540FPPEL
U15	9-933-201-01	s IC M74HC240-1FP
U16	9-933-201-01	s IC M74HC240-1FP
U17	9-933-217-01	s IC HM53051FP-34
U18	9-933-217-01	s IC HM53051FP-34
U19	9-933-217-01	s IC HM53051FP-34
U20	9-933-217-01	s IC HM53051FP-34
U21	9-933-196-01	s IC HD74AC00FP
to U25		
U26	9-933-149-01	s IC HD49226BFS-T
to U33		
U34	9-933-150-01	s IC UPD6382
U35	9-933-150-01	s IC UPD6382
U36	9-933-150-01	s IC UPD6382
U37	9-933-150-01	s IC UPD6382
U38	8-752-326-23	s IC CXK58257M-10L
to U49		
U50	9-933-151-01	s IC 2080
U51	9-933-152-01	s IC 1995

----- FILTER PCB ASSY -----

Ref. No.
or Q'ty Part No. SP Description

1pc 9-909-932-01 o FILTER PCB ASSY
(This assembly includes the following parts.)

2pcs 7-682-547-04 s SCREW +B 3X6
2pcs 9-933-104-01 o PUSH REVET
1pc 9-933-132-01 o PLATE, SHIELD, FILTER PCB
1pc 9-933-395-01 o PLATE, POWER SWITCH

C1 Δ 9-933-298-01 s CAPACITOR 0.02uF 250V
C2 Δ 9-933-298-01 s CAPACITOR 0.02uF 250V
C3 Δ 9-933-297-01 s CAPACITOR 4700PF 400V
to C9

L1 Δ 9-909-982-01 s FILTER, NOISE

P1 Δ 9-933-066-01 o CONNECTOR, 3P, PLUG

P2 Δ 9-933-065-01 o CONNECTOR, 2P, PLUG

S1 Δ 9-933-065-01 o CONNECTOR, 2P, PLUG

----- FUSE PCB ASSY -----

Ref. No.
or Q'ty Part No. SP Description

1pc 9-909-938-01 o FUSE PCB ASSY (For UC)
1pc 9-933-118-01 o FUSE PCB ASSY (For CE)
(These assemblies include the following parts.)

1pc 9-933-019-01 o HOLDER, FUSE

F1 Δ 9-933-008-01 s FUSE, 2A SLOW BLOW (For UC)
Δ 9-933-010-01 s FUSE, 2.0A TIME LUG (For CE)

F2 Δ 9-933-008-01 s FUSE, 2A SLOW BLOW (For UC)
Δ 9-933-010-01 s FUSE, 2.0A TIME LUG (For CE)

F3 Δ 9-933-009-01 s FUSE, 5A SLOW BLOW (For UC)
Δ 9-933-011-01 s FUSE, 5A TIME LUG (For CE)

F4 Δ 9-909-980-01 s FUSE, 125V 6.3A (For UC)
Δ 9-933-012-01 s FUSE, 6.3A TIME LUG (For CE)

P1 Δ 9-933-064-01 o CONNECTOR, 7P, PLUG

P2 Δ 9-933-061-01 o CONNECTOR, 2P, PLUG
to P6

----- IC PCB ASSY -----

Ref. No.
or Q'ty Part No. SP Description

1pc 9-933-119-01 o IC PCB ASSY
(This assembly includes the following parts.)

1pc 1-126-023-11 s ELECT 100UF 20% 25V
1pc 9-933-295-01 s METAL 0.33UF 50V

U1 Δ 8-749-990-05 s IC STR9005

KEY PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-931-01	o KEY PCB ASSY (This assembly includes the following parts.)
4pcs	7-682-547-04	s SCREW +B 3X6
2pcs	9-933-092-01	o FLAT CABLE
4pcs	9-933-362-01	o SPACER A
28pcs	9-933-621-01	o SPACER LH-5 L=14.0
3pcs	9-933-622-01	o SPACER LH-5 L=16.0
6pcs	9-933-623-01	o SPACER LH-5 L=17.75
C1	Pending	ELECT 100uF 16V
C2	Pending	ELECT 100uF 16V
C3	1-164-159-11	s CERAMIC 0.1uF 50V
C4	1-164-159-11	s CERAMIC 0.1uF 50V
C5	Pending	CERAMIC 100PF 50V
C6	Pending	CERAMIC 100PF 50V
C7	1-164-159-11	s CERAMIC 0.1uF 50V
C8	1-164-159-11	s CERAMIC 0.1uF 50V
C9	1-164-159-11	s CERAMIC 0.1uF 50V
C101 to C117	1-164-159-11	s CERAMIC 0.1uF 50V
D1 to D56	8-719-901-33	s DIODE 1SS133
D60 to D67	8-719-901-33	s DIODE 1SS133
D101 to 116	9-933-266-01	s LED SLR-34DU3F, ORG
D117	9-933-264-01	s LED SLR-34MG3F, GRN
D118 to D132	9-933-266-01	s LED SLR-34DU3F, ORG
D133 to D137	9-933-263-01	s LED SLR-34VR3F, RED
P4	9-933-076-01	o CONNECTOR, 18P
P5	9-933-076-01	o CONNECTOR, 18P
P6	9-933-059-01	o CONNECTOR, 8P, PLUG
P7	9-933-059-01	o CONNECTOR, 8P, PLUG
R1 to R16	1-247-807-31	s CARBON 100 5% 1/4W
R17	1-249-421-11	s CARBON 2.2K 5% 1/4W
R19 to R35	1-247-863-91	s CARBON 22K 5% 1/4W
R36	1-214-807-31	s CARBON 100 5% 1/4W
R37	1-214-807-31	s CARBON 100 5% 1/4W
R38 to R45	1-247-863-91	s CARBON 22K 5% 1/4W
R50	9-909-963-01	s RES, ADJ 20K
S1 to S11	9-933-005-01	s SWITCH, PUSH
S12	9-933-007-01	s SWITCH, PUSH
S13 to S17	9-933-005-01	s SWITCH, PUSH
S18	9-933-007-01	s SWITCH, PUSH
S19 to S31	9-933-005-01	s SWITCH, PUSH

(KEY PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
S32	9-933-007-01	s SWITCH, PUSH
S41 to S45	9-909-988-01	s SWITCH, PUSH
S46	9-933-007-01	s SWITCH, PUSH
S51	9-933-007-01	s SWITCH, PUSH
U1	9-933-184-01	s IC M54564P
U2	9-933-184-01	s IC M54564P
U3	9-933-235-01	s IC HD74HC4514P
U4	8-759-634-75	s IC M54585P
U5	9-933-182-01	s IC TC74HC138AP
U6	8-759-209-05	s IC TMP82C79P-2
U7	9-933-234-01	s IC HD74HC541P
U8	9-933-234-01	s IC HD74HC541P
U9	9-933-184-01	s IC M54564P
U10	9-933-184-01	s IC M54564P
U11	9-933-235-01	s IC HD74HC4514P
U12	8-759-634-75	s IC M54585P
U13	8-759-209-05	s IC TMP82C79P-2
U14	9-933-182-01	s IC TC74HC138AP
U15	9-933-204-01	s IC HD74HC32P
U16	8-759-066-26	s IC M66010FP
U17	9-933-234-01	s IC HD74HC541P

METER PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-936-01	o METER PCB ASSY (This assembly includes the following parts.)
1pc	9-933-194-01	s LED, SLA-5993-10
D211 to D218	8-719-940-87	s LED LD-101VR, RED
P10	9-933-076-01	s CONNECTOR, 18P
P11	9-933-076-01	s CONNECTOR, 18P

MOTHER PCB ASSY

Ref. No.
or Q'ty Part No. SP Description

1pc 9-909-927-01 o MOTHER PCB ASSY
(This assembly includes the following parts.)

P101 9-933-026-01 o CONNECTOR, 100P, SOCKET
to P105

P106 9-909-956-01 o CONNECTOR, 10P

P107 9-909-955-01 o CONNECTOR, 7P

P108 9-909-974-01 o CONNECTOR, 10P

P109 9-909-973-01 o CONNECTOR, 12P

P110 9-909-971-01 o CONNECTOR, 9P

P111 9-933-030-01 o CONNECTOR, 13P, PLUG

P112 9-909-970-01 o CONNECTOR, 8P

P113 9-909-972-01 o CONNECTOR, 11P

P114 9-909-969-01 o CONNECTOR, 7P

P115 9-909-960-01 o CONNECTOR, 5P

PSY PCB ASSY

Ref. No.
or Q'ty Part No. SP Description

1pc 9-909-935-01 o PSY PCB ASSY
(This assembly includes the following parts.)

5pcs 7-682-547-04 s SCREW +B 3X6

2pcs 7-682-548-04 s SCREW +B 3X8

1pc 9-933-626-01 o HEAT SINK B

C1 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C2 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C3 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C4 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C5 Δ 9-933-292-01 s ELECT 4700uF 25V

C6 Δ 9-933-292-01 s ELECT 4700uF 25V

C7 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C8 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C9 1-126-022-11 s ELECT 47uF 20% 25V

C10 Δ 1-126-012-11 s ELECT 470uF 20% 16V

C11 Δ 1-126-012-11 s ELECT 470uF 20% 16V

C12 1-164-159-11 s CERAMIC 0.1uF 50V

C13 1-164-159-11 s CERAMIC 0.1uF 50V

C20 Δ 1-126-964-11 s ELECT 10uF 20% 50V

C21 Δ 9-933-293-01 s ELECT 10000 25V

C22 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C23 1-126-301-11 s ELECT 1uF 20% 50V

C24 Δ 1-126-012-11 s ELECT 470uF 20% 16V

C30 Δ 9-933-536-01 s ELECT 39000uF 16V

C31 Δ 1-164-159-11 s CERAMIC 0.1uF 50V

C33 Δ 1-126-023-11 s ELECT 100uF 20% 25V

C34 1-164-159-11 s CERAMIC 0.1uF 50V

C100 Pending CERAMIC 0.1uF 50V

D1 Δ 8-719-500-18 s DIODE D5SB20

D2 Δ 8-719-500-18 s DIODE D5SB20

D3 Δ 8-719-500-18 s DIODE D5SB20

D4 Δ 9-933-257-01 s DIODE 1SS130

D5 Δ 9-933-257-01 s DIODE 1SS130

D6 Δ 8-719-110-12 s DIODE RD9.1ESB1

D7 Δ 9-933-257-01 s DIODE 1SS130

D8 Δ 9-933-111-01 s DIODE ERB12-02G1

P1 Δ 9-933-064-01 o CONNECTOR, 7P, PLUG

P2 9-933-037-01 o CONNECTOR, 3P, PLUG

P3 9-933-049-01 o CONNECTOR, 3P, PLUG

P4 9-933-062-01 o CONNECTOR, 3P, PLUG

P5 9-933-063-01 o CONNECTOR, 4P, PLUG

P6 9-933-048-01 o CONNECTOR, 10P, PLUG

P7 9-933-046-01 o CONNECTOR, 6P, PLUG

P8 9-933-045-01 o CONNECTOR, 4P, PLUG

P9 9-933-047-01 o CONNECTOR, 7P, PLUG

P10 9-933-051-01 o CONNECTOR, 6P, PLUG

P11 9-933-050-01 o CONNECTOR, 4P, PLUG

P12 9-933-036-01 o CONNECTOR, 2P, PLUG

Q1 8-729-900-36 s TRANSISTOR DTC124ES

Q2 8-729-900-36 s TRANSISTOR DTC124ES

Q3 8-729-900-36 s TRANSISTOR DTC124ES

Q4 8-729-900-36 s TRANSISTOR DTC124ES

Q5 Δ 8-729-201-53 s TRANSISTOR 2SA1015 GR

Q6 Δ 9-933-112-01 s TRANSISTOR 2SD313E

R1 Δ 9-933-116-01 s CARBON 220

R2 Δ 9-933-116-01 s CARBON 220

(PSY PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R3	△ 9-933-281-01	s CARBON 390
R4	△ 9-933-281-01	s CARBON 390
R5	1-215-450-00	s METAL 16K 1% 1/4W
R6	1-215-431-00	s METAL 2.7K 1% 1/4W
R7	1-215-433-00	s METAL 3.3K 1% 1/4W
R8	1-215-449-00	s METAL 15K 1% 1/4W
R9	1-215-449-00	s METAL 15K 1% 1/4W
R10	1-249-421-11	s CARBON 2.2K 5% 1/4W
R11	1-247-863-91	s CARBON 22K 5% 1/4W
R12	1-247-863-91	s CARBON 22K 5% 1/4W
R13	1-247-903-00	s CARBON 1.0M 5% 1/4W
R14	△ 9-933-116-01	s CARBON 220
R15	1-215-451-00	s METAL 18K 1% 1/4W
R16	1-215-443-00	s METAL 8.2K 1% 1/4W
R17	1-215-436-00	s METAL 4.3K 1% 1/4W
R18	1-249-431-11	s CARBON 15K 5% 1/4W
R19	△ 9-933-282-01	s RESISTOR 47 1W
R20	1-249-422-11	s CARBON 2.7K 5% 1/4W
R21	9-933-117-01	s RESISTOR 0.27 5W
R22	1-249-417-11	s CARBON 1.0K 5% 1/4W
R23	1-249-430-11	s CARBON 12K 5% 1/4W
U1	8-759-602-66	s IC M5230L-A
U4	△ 8-759-632-07	s IC M5237L
U6	△ 1-808-207-11	s PHOTO COUPLER TLP521-1

REC/PLAY AMP PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-937-01	o REC/PLAY AMP PCB ASSY (This assembly includes the following parts.)
4pcs	7-682-547-04	s SCREW +B 3X6
1pc	9-933-405-01	o PLATE, R/P PCB
C1	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C2	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C3	1-163-121-00	s CERAMIC, CHIP 150PF 5% 50V
C4	1-163-121-00	s CERAMIC, CHIP 150PF 5% 50V
C5	1-163-241-11	s CERAMIC, CHIP 39PF 5% 50V
C6	1-163-241-11	s CERAMIC, CHIP 39PF 5% 50V
C7	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C8	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C9	1-163-017-00	s CERAMIC, CHIP 0.0047uF 10% 50V
C10	1-163-017-00	s CERAMIC, CHIP 0.0047uF 10% 50V
C11	1-164-161-11	s CERAMIC, CHIP 0.0022uF 10% 100V
C12	1-164-161-11	s CERAMIC, CHIP 0.0022uF 10% 100V
C13	Pending	CERAMIC, CHIP 0.022uF 50V
C14	Pending	CERAMIC, CHIP 0.022uF 50V
C15	1-163-220-11	s CERAMIC, CHIP 3.0PF 50V
C16	1-163-220-11	s CERAMIC, CHIP 3.0PF 50V
C17	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C18	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C19	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C20	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C21	1-163-099-00	s CERAMIC, CHIP 18PF 5% 50V
C22	1-163-099-00	s CERAMIC, CHIP 18PF 5% 50V
C23	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C24	1-164-232-11	s CERAMIC, CHIP 0.01uF 10% 100V
C51	1-128-065-11	s ELECT, CHIP 68uF 20% 10V
C52	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C53	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C54	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C55	1-128-065-11	s ELECT, CHIP 68uF 20% 10V
C56	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C59	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C60	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C61	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C62	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C63	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C64	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C65	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C66	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C67	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C68	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C69	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C70	1-124-779-00	s ELECT, CHIP 10uF 20% 16V
C71	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C72	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C73	1-128-065-11	s ELECT, CHIP 68uF 20% 10V
C74	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C75	1-128-065-11	s ELECT, CHIP 68uF 20% 10V
C76	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C81	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C82	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C84	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
C201	1-128-065-11	s ELECT, CHIP 68uF 20% 10V
C202	1-163-038-00	s CERAMIC, CHIP 0.1uF 25V
to C207		

(REC/PLAY AMP PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
C210	1-164-346-11	s CERAMIC, CHIP 1uF 16V
L1	9-933-057-01	s INDUCTOR, CHIP 47uH
L2	9-933-057-01	s INDUCTOR, CHIP 47uH
L3	9-933-054-01	s INDUCTOR 33uH
P1	9-909-959-01	o CONNECTOR, 4P
P2	9-909-968-01	o CONNECTOR, 6P
P3	9-909-970-01	o CONNECTOR, 8P
P4	9-909-969-01	o CONNECTOR, 7P
P201	9-909-957-01	o CONNECTOR, 2P
P202	9-909-969-01	o CONNECTOR, 7P
P203	9-909-958-01	o CONNECTOR, 3P
P204	9-909-968-01	o CONNECTOR, 6P
Q1	8-729-920-59	s TRANSISTOR IMX2
Q2	8-729-920-59	s TRANSISTOR IMX2
Q203	8-729-900-53	s TRANSISTOR DTC114EK
R1	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R2	1-216-057-00	s METAL, CHIP 2.2K 5% 1/10W
R3	1-216-055-00	s METAL, CHIP 1.8K 5% 1/10W
R4	1-216-055-00	s METAL, CHIP 1.8K 5% 1/10W
R5	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R6	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R7	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R8	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R9	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R10	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R11	1-216-045-00	s METAL, CHIP 680 5% 1/10W
R12	1-216-045-00	s METAL, CHIP 680 5% 1/10W
R13	1-216-045-00	s METAL, CHIP 680 5% 1/10W
R14	1-216-045-00	s METAL, CHIP 680 5% 1/10W
R15	1-216-053-00	s METAL, CHIP 1.5K 5% 1/10W
R16	1-216-053-00	s METAL, CHIP 1.5K 5% 1/10W
R17	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R18	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R19	1-216-067-00	s METAL, CHIP 5.6K 5% 1/10W
R20	1-216-067-00	s METAL, CHIP 5.6K 5% 1/10W
R21	1-216-059-00	s METAL, CHIP 2.7K 5% 1/10W
R22	1-216-059-00	s METAL, CHIP 2.7K 5% 1/10W
R23	1-216-031-00	s METAL, CHIP 180 5% 1/10W
R24	1-216-031-00	s METAL, CHIP 180 5% 1/10W
R25	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R26	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R27	1-216-077-00	s METAL, CHIP 15K 5% 1/10W
R28	1-216-077-00	s METAL, CHIP 15K 5% 1/10W
R29	1-216-103-91	s METAL, CHIP 180K 5% 1/10W
R30	1-216-103-91	s METAL, CHIP 180K 5% 1/10W
R31	1-216-067-00	s METAL, CHIP 5.6K 5% 1/10W
R32	1-216-067-00	s METAL, CHIP 5.6K 5% 1/10W
R33	1-216-103-91	s METAL, CHIP 180K 5% 1/10W
R34	1-216-103-91	s METAL, CHIP 180K 5% 1/10W
R35	1-216-077-00	s METAL, CHIP 15K 5% 1/10W
R36	1-216-077-00	s METAL, CHIP 15K 5% 1/10W
R37	1-216-077-00	s METAL, CHIP 15K 5% 1/10W
R38	1-216-077-00	s METAL, CHIP 15K 5% 1/10W
R39	1-216-071-00	s METAL, CHIP 8.2K 5% 1/10W
R40	1-216-071-00	s METAL, CHIP 8.2K 5% 1/10W
R41	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R42	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W

(REC/PLAY AMP PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R43	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R44	1-216-061-00	s METAL, CHIP 3.3K 5% 1/10W
R67	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R101	9-933-300-01	s RES, ADJ 47K
R102	9-933-300-01	s RES, ADJ 47K
R103	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R104	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R201	9-933-299-01	s RES, ADJ 220
R202	9-933-299-01	s RES, ADJ 220
R256	1-216-025-00	s METAL, CHIP 100 5% 1/10W
to R263		
R264	1-216-025-00	s METAL, CHIP 100 5% 1/10W
to R271		
R272	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R273	1-216-033-00	s METAL, CHIP 220 5% 1/10W
R276	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R277	1-216-081-00	s METAL, CHIP 22K 5% 1/10W
TP23	9-933-024-01	o CONNECTOR, 2P, PLUG
U1	9-933-227-01	s IC HD49229
U2	9-933-227-01	s IC HD49229
U3	8-759-235-14	s IC TC74HC04AF-TP2
U4	8-759-232-02	s IC TC74HC00AF
U6	8-759-235-14	s IC TC74HC04AF-TP2
U26	9-909-985-01	s EMI FILTER, CHIP
to U30		
U201	8-759-235-14	s IC TC74HC04AF-TP2
U202	8-759-235-14	s IC TC74HC04AF-TP2
U203	8-759-235-06	s IC TC74HC02AF-TP2
U204	9-933-041-01	s IC MC74HC574FR
U205	9-933-041-01	s IC MC74HC574FR
U206	9-909-985-01	s EMI FILTER
W201	1-216-295-91	s CONDUCTOR, CHIP

RF AMP ASSY

Ref. No.

or Q'ty Part No. SP Description

1pc 9-909-933-01 o RF AMP PCB ASSY
(This assembly includes the following parts.)

1pc 9-933-624-01 o SHIELD, RF

C1 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C2 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C3 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C4 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C5 1-164-182-11 s CERAMIC, CHIP 0.0033uF 100V
to C10

C11 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V
C12 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V
C13 1-164-182-11 s CERAMIC, CHIP 0.0033uF 100V
to C18

C19 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V
C20 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V
C21 1-163-105-00 s CERAMIC, CHIP 33PF 5% 50V
C22 1-163-105-00 s CERAMIC, CHIP 33PF 5% 50V
C23 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V

C24 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V
C25 1-163-121-00 s CERAMIC, CHIP 150PF 5% 50V
C26 1-163-121-00 s CERAMIC, CHIP 150PF 5% 50V
C27 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V
C28 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V

C29 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V
C30 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V
C31 1-163-131-00 s CERAMIC, CHIP 390PF 5% 50V
C32 1-163-131-00 s CERAMIC, CHIP 390PF 5% 50V
C33 1-163-105-00 s CERAMIC, CHIP 33PF 5% 50V

C34 1-163-105-00 s CERAMIC, CHIP 33PF 5% 50V
C35 1-164-232-11 s CERAMIC, CHIP 0.01uF 10% 100V
to C42

C43 1-164-346-11 s CERAMIC, CHIP 1uF 16V
C44 1-164-346-11 s CERAMIC, CHIP 1uF 16V
C51 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V
C52 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C55 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V

C56 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C57 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V
C58 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C59 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V
C60 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V

C61 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V
C62 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C63 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V
C64 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V
C65 1-126-205-11 s ELECT, CHIP 47uF 20% 6.3V

C66 1-163-038-00 s CERAMIC, CHIP 0.1uF 25V

L2 9-933-057-01 s INDUCTOR, CHIP 47uH
to L7

P1 9-933-068-01 o CONNECTOR, 8P

P2 9-933-073-01 o CONNECTOR, 7P, PLUG

P3 9-933-071-01 o CONNECTOR, 3P, PLUG

Q1 9-909-994-01 s TRANSISTOR 2SC2412K
Q2 9-909-994-01 s TRANSISTOR 2SC2412K
Q3 8-729-901-00 s TRANSISTOR DTC124EK
to Q7

(RF AMP ASSY)

Ref. No.

or Q'ty Part No. SP Description

R1 1-216-073-00 s METAL, CHIP 10K 5% 1/10W

R2 1-216-073-00 s METAL, CHIP 10K 5% 1/10W
R3 1-216-065-00 s METAL, CHIP 4.7K 5% 1/10W
R4 1-216-065-00 s METAL, CHIP 4.7K 5% 1/10W
R5 1-216-065-00 s METAL, CHIP 4.7K 5% 1/10W
R6 1-216-065-00 s METAL, CHIP 4.7K 5% 1/10W

R7 1-216-045-00 s METAL, CHIP 680 5% 1/10W
R8 1-216-045-00 s METAL, CHIP 680 5% 1/10W
R9 1-216-033-00 s METAL, CHIP 220 5% 1/10W
R10 1-216-033-00 s METAL, CHIP 220 5% 1/10W
R11 1-216-033-00 s METAL, CHIP 220 5% 1/10W

R12 1-216-033-00 s METAL, CHIP 220 5% 1/10W
R13 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W
R14 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W
R15 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W
R16 1-216-057-00 s METAL, CHIP 2.2K 5% 1/10W

R17 1-216-047-11 s METAL, CHIP 820 5% 1/10W
R18 1-216-047-11 s METAL, CHIP 820 5% 1/10W
R19 1-216-041-00 s METAL, CHIP 470 5% 1/10W
R20 1-216-041-00 s METAL, CHIP 470 5% 1/10W
R21 1-216-043-91 s METAL, CHIP 560 5% 1/10W

R22 1-216-043-91 s METAL, CHIP 560 5% 1/10W
R23 1-216-073-00 s METAL, CHIP 10K 5% 1/10W
R24 1-216-073-00 s METAL, CHIP 10K 5% 1/10W
R25 1-216-041-00 s METAL, CHIP 470 5% 1/10W
R26 1-216-041-00 s METAL, CHIP 470 5% 1/10W

R27 1-216-073-00 s METAL, CHIP 10K 5% 1/10W
R51 9-909-961-01 s RES, ADJ 2.2K
R52 9-909-961-01 s RES, ADJ 2.2K
R53 9-909-961-01 s RES, ADJ 2.2K
R54 9-909-961-01 s RES, ADJ 2.2K

U1 9-933-244-01 s IC HA12133MP
U2 9-933-244-01 s IC HA12133MP
U3 8-752-030-66 s IC CXA1077M
U4 8-759-710-86 s IC NJM2233BM

SERVO PCB ASSY

Ref. No.

or Q'ty Part No. SP Description

1pc 9-909-939-01 o SERVO PCB ASSY
(This assembly includes the following parts.)

C1	1-163-038-00 s	CERAMIC CHIP 100000PF 25V
C2	1-163-038-00 s	CERAMIC CHIP 100000PF 25V
C3	1-163-125-00 s	CERAMIC CHIP 220PF 5% 50V
C5	1-163-125-00 s	CERAMIC CHIP 220PF 5% 50V
C6	1-163-125-00 s	CERAMIC CHIP 220PF 5% 50V
C7	1-163-038-00 s	CERAMIC CHIP 100000PF 25V
to C10		
C11	Pending	ELECT, CHIP 10uF 16V
C12	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C13	Pending	ELECT, CHIP 100uF 16V
C15	1-163-121-00 s	CERAMIC, CHIP 150PF 50V
C16	1-164-161-11 s	CERAMIC, CHIP 2200PF 100V
C17	1-163-009-11 s	CERAMIC, CHIP 1000PF 50V
C18	Pending	ELECT, CHIP 4.7uF 25V
C19	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C20	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C21	1-164-346-11 s	CERAMIC, CHIP 1uF 10% 25V
C22	Pending	ELECT, CHIP 10uF 16V
C23	Pending	ELECT, CHIP 10uF 16V
C100	1-163-031-11 s	CERAMIC, CHIP 0.01uF 50V
C101	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C102	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C103	1-163-129-00 s	CERAMIC, CHIP 330PF 5% 50V
C104	1-163-129-00 s	CERAMIC, CHIP 330PF 5% 50V
C105	1-163-129-00 s	CERAMIC, CHIP 330PF 5% 50V
C106	1-163-037-00 s	CERAMIC, CHIP 0.022uF 10% 25V
C107	Pending	ELECT, CHIP 22uF 16V
C108	Pending	ELECT, CHIP 22uF 16V
C109	1-163-037-00 s	CERAMIC, CHIP 0.022uF 10% 25V
C110	1-163-035-00 s	CERAMIC, CHIP 0.047uF 50V
C111	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C112	1-164-493-11 s	CERAMIC, CHIP 0.047uF 10% 50V
C113	1-163-037-00 s	CERAMIC, CHIP 0.022uF 10% 25V
C114	1-163-037-00 s	CERAMIC, CHIP 0.022uF 10% 25V
C115	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C116	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C117	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C118	Pending	ELECT, CHIP 10uF 16V
C119	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C120	Pending	ELECT, CHIP 10uF 16V
C200	Pending	ELECT, CHIP 10uF 16V
C201	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C204	1-164-346-11 s	CERAMIC, CHIP 1uF 10% 25V
C205	1-164-346-11 s	CERAMIC, CHIP 1uF 10% 25V
C206	Pending	ELECT, CHIP 2.2uF 25V
C207	1-163-093-00 s	CERAMIC, CHIP 10PF 5% 50V
C208	1-163-093-00 s	CERAMIC, CHIP 10PF 5% 50V
C209	1-163-031-11 s	CERAMIC, CHIP 0.01uF 50V
C210	1-163-031-11 s	CERAMIC, CHIP 0.01uF 50V
C400	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C401	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C402	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C403	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C404	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C405	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C406	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V

(SERVO PCB ASSY)

Ref. No.

or Q'ty Part No. SP Description

C407	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C408	Pending	ELECT, CHIP 47uF 20V
C500	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C501	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C502	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C503	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C504	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C505	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C506	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C507	1-164-346-11 s	CERAMIC, CHIP 1uF 10% 25V
C508	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C509	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C510	Pending	ELECT, CHIP 47uF 20V
C600	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C601	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C602	1-164-346-11 s	CERAMIC, CHIP 1uF 10% 25V
C603	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C604	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C605	1-104-329-11 s	CERAMIC, CHIP 100000PF 10% 50V
C606	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C607	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C608	1-163-009-11 s	CERAMIC, CHIP 1000PF 10% 50V
C609	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C610	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C612	Pending	ELECT, CHIP 47uF 20V
C700	Pending	ELECT, CHIP 10uF 16V
C701	Pending	ELECT, CHIP 10uF 16V
C702	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C703	1-163-038-00 s	CERAMIC, CHIP 100000PF 25V
C800	Pending	ELECT, CHIP 4.7uF 12.5V
C801	Pending	ELECT, CHIP 8.2uF 8V
D2	9-909-989-01 s	DIODE DA119
D4	9-909-989-01 s	DIODE DA119
D400	8-719-210-39 s	DIODE EC10QS-04
D500	8-719-210-39 s	DIODE EC10QS-04
D600	8-719-210-39 s	DIODE EC10QS-04
D701	1-216-295-00 s	METAL, CHIP 0 5% 1/10W
L1	9-933-056-01 s	INDUCTOR 100uH
L100	9-933-055-01 s	INDUCTOR, CHIP 330uH
L101	9-933-056-01 s	INDUCTOR 100uH
L102	9-933-056-01 s	INDUCTOR 100uH
L200	9-933-056-01 s	INDUCTOR 100uH
L400	9-909-966-01 s	INDUCTOR, CHIP 390uH
L500	9-909-966-01 s	INDUCTOR, CHIP 390uH
L600	9-909-967-01 s	INDUCTOR, CHIP 150uH
P1	9-909-976-01 o	CONNECTOR, 15P
P2	9-909-975-01 o	CONNECTOR, 15P
P3	9-933-067-01 o	CONNECTOR, 7P
P4	9-909-976-01 o	CONNECTOR, 15P
P5	9-909-976-01 o	CONNECTOR, 15P
P6	9-933-075-01 o	CONNECTOR, 9P, PLUG
P7	9-933-074-01 o	CONNECTOR, 8P, PLUG
P8	9-933-072-01 o	CONNECTOR, 4P, PLUG
P9	9-933-069-01 o	CONNECTOR, 4P, PLUG
P10	9-933-071-01 o	CONNECTOR, 3P, PLUG
P11	9-933-070-01 o	CONNECTOR, 2P, PLUG
P12	9-933-070-01 o	CONNECTOR, 2P, PLUG

(SERVO PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
Q1	8-729-900-52	s TRANSISTOR DTC114YK
Q2	9-909-994-01	s TRANSISTOR 2SC2412K
Q3	9-909-994-01	s TRANSISTOR 2SC2412K
Q100	9-909-994-01	s TRANSISTOR 2SC2412K
Q101	9-909-994-01	s TRANSISTOR 2SC2412K
Q102	9-909-995-01	s TRANSISTOR DTC123JK-T96
Q103	8-729-922-73	s TRANSISTOR DTC123JK
Q104	8-729-901-04	s TRANSISTOR DTA114EK
Q105	8-729-901-04	s TRANSISTOR DTA114EK
Q400	9-933-274-01	s TRANSISTOR 2SA1314B-TE12L,C
Q500	9-933-274-01	s TRANSISTOR 2SA1314B-TE12L,C
Q600	9-933-274-01	s TRANSISTOR 2SA1314B-TE12L,C
R1	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R2	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R3	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R4	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R5	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R6	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R7	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R8	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R9	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R10	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R11	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
to R14		
R15	1-216-081-00	s METAL, CHIP 22K 5% 1/4W
R16	1-216-081-00	s METAL, CHIP 22K 5% 1/4W
R17	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R18	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R19	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R20	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
to R23		
R28	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R29	1-216-076-00	s METAL, CHIP 13K 5% 1/10W
R30	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R31	1-216-034-00	s METAL, CHIP 240 5% 1/10W
R32	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R33	1-216-071-00	s METAL, CHIP 8.2K 5% 1/10W
R34	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R35	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R36	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R37	1-216-071-00	s METAL, CHIP 8.2K 5% 1/10W
R38	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R39	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R40	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R41	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R42	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R43	1-216-017-00	s METAL, CHIP 47 5% 1/10W
R44	1-216-021-00	s METAL, CHIP 68 5% 1/10W
R45	1-216-021-00	s METAL, CHIP 68 5% 1/10W
R46	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R47	1-216-105-91	s METAL, CHIP 220K 5% 1/10W
R48	1-216-689-11	s METAL, CHIP 39K 5% 1/10W
R49	1-216-021-00	s METAL, CHIP 68 5% 1/10W
R50	1-216-021-00	s METAL, CHIP 68 5% 1/10W
R51	9-909-962-01	s RES, ADJ METAL 22K
R52	1-216-017-00	s METAL, CHIP 47 5% 1/10W

(SERVO PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R53	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R54	1-216-105-91	s METAL, CHIP 220K 5% 1/10W
R100	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R101	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R102	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R103	1-216-081-00	s METAL, CHIP 22K 5% 1/4W
R104	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R105	1-216-045-00	s METAL, CHIP 680 5% 1/10W
R106	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R107	1-216-065-00	s METAL, CHIP 4.7K 5% 1/10W
R108	1-216-085-00	s METAL, CHIP 33K 5% 1/10W
R109	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R110	1-216-081-00	s METAL, CHIP 22K 5% 1/4W
R111	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R112	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R113	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R114	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R115	1-216-117-00	s METAL, CHIP 680K 5% 1/10W
R116	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R117	1-216-113-00	s METAL, CHIP 470K 5% 1/10W
R118	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R119	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R120	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R121	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R122	1-216-073-00	s METAL, CHIP 10K 5% 1/10W
R125	1-216-295-00	s RES, CHIP 0 5% 1/10W
R202	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R203	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R204	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R205	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R206	1-216-080-00	s METAL, CHIP 20K 5% 1/10W
R211	1-216-121-00	s METAL, CHIP 1M 5% 1/10W
R212	1-216-080-00	s METAL, CHIP 20K 5% 1/10W
R400	1-216-039-00	s METAL, CHIP 390 5% 1/10W
R401	1-216-039-00	s METAL, CHIP 390 5% 1/10W
R402	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R403	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R404	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R405	1-218-236-91	s METAL, CHIP 1.0 10% 1/4W
R406	1-218-236-91	s METAL, CHIP 1.0 10% 1/4W
R407	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R408	1-216-041-00	s METAL, CHIP 470 5% 1/10W
R409	1-220-261-11	s RES, CHIP 470 5% 1/4W
R500	1-216-039-00	s METAL, CHIP 390 5% 1/10W
R501	1-216-039-00	s METAL, CHIP 390 5% 1/10W
R502	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R503	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R504	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R505	1-218-236-91	s METAL, CHIP 1.0 10% 1/4W
R506	1-218-236-91	s METAL, CHIP 1.0 10% 1/4W
R507	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R508	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W
R509	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R510	1-216-080-00	s METAL, CHIP 20K 5% 1/10W
R512	1-216-023-00	s METAL, CHIP 82 5% 1/10W
R513	1-220-261-11	s METAL, CHIP 470 5% 1/4W
R601	1-216-089-00	s METAL, CHIP 47K 5% 1/10W
R602	1-216-097-00	s METAL, CHIP 100K 5% 1/10W
R603	1-216-049-00	s METAL, CHIP 1.0K 5% 1/10W

(SERVO PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R604	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R605	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R606	1-216-308-00	s METAL, CHIP 4.7 5% 1/10W
R607	1-218-236-91	s METAL, CHIP 1.0 10% 1/4W
R608	1-218-236-91	s METAL, CHIP 1.0 10% 1/4W
R609	1-216-039-00	s METAL, CHIP 390 5% 1/10W
R610	1-216-039-00	s METAL, CHIP 390 5% 1/10W
R612	1-216-095-00	s METAL, CHIP 82K 5% 1/10W
R613	1-216-079-00	s METAL, CHIP 18K 5% 1/10W
R614	1-216-083-00	s METAL, CHIP 27K 5% 1/10W
R618	1-220-261-11	s RES, CHIP 470 5% 1/4W
R619	1-216-025-00	s METAL, CHIP 100 5% 1/10W
R700	1-216-038-00	s METAL, CHIP 360 5% 1/10W
U1	9-933-254-01	o SERVO CPU
U2	8-752-035-48	s IC CXA1204Q
U3	8-759-823-90	s IC LB8110M
U4	8-759-080-23	s IC LB1851M
U5	8-759-080-23	s IC LB1851M
U6	8-759-080-23	s IC LB1851M
U7	8-759-823-94	s IC LB1836M
U8	8-759-983-96	s IC TL5001CPS
U9	8-759-232-02	s IC TC74HC00AF
U10	9-933-156-01	s IC MC74HC14AF
U11	8-759-251-48	s IC UPC358GR-E1
U12	9-933-040-01	s IC 74HC163F
U13	9-933-158-01	s IC HD74HC74FP
U14	8-759-232-02	s IC TC74HC00AF

SYSCON PCB ASSY

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-928-01	o SYSCON PCB ASSY (This assembly includes the following parts.)
2pcs	7-682-547-04	s SCREW +B3X6
1pc	9-933-020-01	s SOCKET, IC 28P
1pc	9-933-106-01	o PANEL, SYS
4pcs	9-933-370-01	s SCREW M2.6X0.45
1pc	9-933-460-01	o SHIELD CASE A
1pc	9-933-469-01	s WASHER
1pc	9-933-605-01	s SCREW M3X8
1pc	9-933-613-01	o SHIELD CASE B
1pc	9-933-614-01	o SHIELD SYS
BT1	Δ 9-933-077-01	s BATTERY, LITHIUM
C1	1-124-994-11	s ELECT 100uF 20% 10V
C2	1-124-994-11	s ELECT 100uF 20% 10V
C3	1-164-159-11	s CERAMIC 0.1uF 50V
C4	1-164-159-11	s CERAMIC 0.1uF 50V
C10	1-164-159-11	s CERAMIC 0.1uF 50V
C12	1-164-159-11	s CERAMIC 0.1uF 50V
C13	1-164-159-11	s CERAMIC 0.1uF 50V
C14	Pending	CAPACITOR 100PF 50V
C15	1-164-159-11	s CERAMIC 0.1uF 50V
	to C18	
C19	1-126-301-11	s ELECT 1uF 20% 50V
C20	1-164-159-11	s CERAMIC 0.1uF 50V
C21	1-124-994-11	s ELECT 100uF 20% 10V
C22	1-124-994-11	s ELECT 100uF 20% 10V
C24	1-124-994-11	s ELECT 100uF 20% 10V
C25	1-164-159-11	s CERAMIC 0.1uF 50V
C26	9-933-270-01	s DIODE FC53M
C27	1-164-159-11	s CERAMIC 0.1uF 50V
	to C30	
C31	Pending	METAL 0.1uF 50V
C32	1-124-994-11	s ELECT 100uF 20% 10V
C33	1-164-159-11	s CERAMIC 0.1uF 50V
C34	1-164-159-11	s CERAMIC 0.1uF 50V
C35	1-164-159-11	s CERAMIC 0.1uF 50V
C36	1-124-994-11	s ELECT 100uF 20% 10V
C37	1-124-994-11	s ELECT 100uF 20% 10V
C39	1-124-994-11	s ELECT 100uF 20% 10V
C40	1-164-159-11	s CERAMIC 0.1uF 50V
C41	1-102-851-41	s CERAMIC 15PF 5% 50V
C42	Pending	METAL 0.22uF 50V
C43	1-164-159-11	s CERAMIC 0.1uF 50V
C44	1-124-994-11	s ELECT 100uF 20% 10V
C45	1-164-159-11	s CERAMIC 0.1uF 50V
	to C48	
C49	1-124-994-11	s ELECT 100uF 20% 10V
C50	1-124-994-11	s ELECT 100uF 20% 10V
C52	1-124-994-11	s ELECT 100uF 20% 10V
C53	1-164-159-11	s CERAMIC 0.1uF 50V
C54	1-102-961-00	s CERAMIC 27PF 5% 50V
C55	Pending	METAL 0.22uF 50V
C56	1-124-994-11	s ELECT 100uF 20% 10V
C57	1-124-994-11	s ELECT 100uF 20% 10V
C58	Pending	METAL 0.01uF 50V
C59	Pending	METAL 0.1uF 50V
C60	1-164-159-11	s CERAMIC 0.1uF 50V

(SYSCON PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
C61	1-164-159-11	s CERAMIC 0.1uF 50V
C62	1-164-159-11	s CERAMIC 0.1uF 50V
C64	1-164-159-11	s CERAMIC 0.1uF 50V
C66	Pending	CERAMIC 330uF 50V
C67	Pending	CERAMIC 330uF 50V
C68	1-164-159-11	s CERAMIC 0.1uF 50V
C69	1-124-478-11	s ELECT 100uF 20% 25V
C70	1-164-159-11	s CERAMIC 0.1uF 50V
to C75		
C76	1-124-994-11	s ELECT 100uF 20% 10V
C77	1-164-159-11	s CERAMIC 0.1uF 50V
to C80		
C82	1-124-994-11	s ELECT 100uF 20% 10V
C83	1-164-159-11	s CERAMIC 0.1uF 50V
to C86		
C87	1-124-994-11	s ELECT 100uF 20% 10V
C88	1-164-159-11	s CERAMIC 0.1uF 50V
to C94		
C95	1-124-994-11	s ELECT 100uF 20% 10V
C96	1-124-994-11	s ELECT 100uF 20% 10V
C97	1-164-159-11	s CERAMIC 0.1uF 50V
to C103		
C104	1-124-994-11	s ELECT 100uF 20% 10V
C105	1-124-994-11	s ELECT 100uF 20% 10V
C106	1-164-159-11	s CERAMIC 0.1uF 50V
to C110		
C112	1-124-994-11	s ELECT 100uF 20% 10V
C113	1-124-994-11	s ELECT 100uF 20% 10V
C114	1-164-159-11	s CERAMIC 0.1uF 50V
to C118		
C119	1-124-994-11	s ELECT 100uF 20% 10V
C120	1-124-994-11	s ELECT 100uF 20% 10V
C121	1-124-994-11	s ELECT 100uF 20% 10V
C122	1-164-159-11	s CERAMIC 0.1uF 50V
to C126		
C127	1-124-994-11	s ELECT 100uF 20% 10V
C128	1-164-159-11	s CERAMIC 0.1uF 50V
to C131		
C132	1-124-994-11	s ELECT 100uF 20% 10V
C133	1-164-159-11	s CERAMIC 0.1uF 50V
C135	1-102-074-00	s CERAMIC 1000PF 10% 50V
C136	1-102-074-00	s CERAMIC 1000PF 10% 50V
C200	1-164-159-11	s CERAMIC 0.1uF 50V
to C205		
D1	8-719-981-50	s DIODE RB-100A
D2	8-719-980-37	s DIODE DAN803
D3	8-719-980-36	s DIODE DAP803
D4	8-719-981-36	s DIODE DAP803
D5	8-719-980-37	s DIODE DAN803
J1	9-933-027-01	s CONNECTOR, DSUB 15P, SOCKET
J2	9-933-027-01	s CONNECTOR, DSUB 15P, SOCKET
J3	9-933-031-01	s CONNECTOR, BNC, SOCKET
J4	9-933-029-01	s CONNECTOR, DIN 8P, SOCKET
J5	9-933-016-01	s JACK 1P
L1	9-909-964-01	s COIL, CHOKE 1.0uH
L2	9-909-965-01	s COIL, CHOKE 10uH

(SYSCON PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
L3	9-909-965-01	s COIL, CHOKE 10uH
to L8		
P1	9-933-025-01	o CONNECTOR, 100P, PLUG
P3	9-933-024-01	o CONNECTOR, 2P, PLUG
Q1	8-729-297-02	s TRANSISTOR 2SA970-BL
Q2	8-729-281-53	s TRANSISTOR 2SC1815-GR
R9	1-247-808-11	s CARBON 110 5% 1/4W
R10	1-249-409-11	s CARBON 220 5% 1/4W
R11	1-249-429-11	s CARBON 10K 5% 1/4W
R12	1-249-429-11	s CARBON 10K 5% 1/4W
R13	1-247-807-31	s CARBON 100 5% 1/4W
R14	1-249-429-11	s CARBON 10K 5% 1/4W
to R18		
R19	1-249-417-11	s CARBON 1.0K 5% 1/4W
R21	1-249-429-11	s CARBON 10K 5% 1/4W
R23	1-249-426-11	s CARBON 5.6K 5% 1/4W
R25	1-249-424-11	s CARBON 3.9K 5% 1/4W
R26	1-249-429-11	s CARBON 10K 5% 1/4W
R28	1-249-424-11	s CARBON 3.9K 5% 1/4W
R30	1-249-424-11	s CARBON 3.9K 5% 1/4W
R31	1-249-429-11	s CARBON 10K 5% 1/4W
R32	1-249-424-11	s CARBON 3.9K 5% 1/4W
R36	1-249-417-11	s CARBON 1.0K 5% 1/4W
R40	1-249-423-11	s CARBON 3.3K 5% 1/4W
R41	1-249-422-11	s CARBON 2.7K 5% 1/4W
R42	1-249-423-11	s CARBON 3.3K 5% 1/4W
R43	1-249-422-11	s CARBON 2.7K 5% 1/4W
R45	1-249-429-11	s CARBON 10K 5% 1/4W
R46	1-249-429-11	s CARBON 10K 5% 1/4W
R47	1-249-429-11	s CARBON 10K 5% 1/4W
R48	1-247-864-11	s CARBON 24K 5% 1/4W
to R51		
R52	1-249-429-11	s CARBON 10K 5% 1/4W
R53	1-249-429-11	s CARBON 10K 5% 1/4W
R54	1-249-429-11	s CARBON 10K 5% 1/4W
R100	1-247-807-31	s CARBON 100 5% 1/4W
R101	1-247-807-31	s CARBON 100 5% 1/4W
R102	1-247-791-91	s CARBON 22 5% 1/4W
R103	1-247-807-31	s CARBON 100 5% 1/4W
to R106		
R107	1-247-791-91	s CARBON 22 5% 1/4W
to R113		
R114	1-247-807-31	s CARBON 100 5% 1/4W
to R117		
R118	1-247-791-91	s CARBON 22 5% 1/4W
to R123		
R124	1-247-807-31	s CARBON 100 5% 1/4W
R126	1-247-807-31	s CARBON 100 5% 1/4W
R125	1-249-401-11	s CARBON 47 5% 1/4W
R127	1-247-807-31	s CARBON 100 5% 1/4W
R128	1-249-401-11	s CARBON 47 5% 1/4W
R129	1-249-401-11	s CARBON 47 5% 1/4W
R130	1-247-791-91	s CARBON 22 5% 1/4W
R131	1-249-401-11	s CARBON 47 5% 1/4W

(SYSCON PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R132	1-247-791-91	s CARBON 22 5% 1/4W
R133	1-247-807-31	s CARBON 100 5% 1/4W
R134	1-247-791-91	s CARBON 22 5% 1/4W
R135	1-247-791-91	s CARBON 22 5% 1/4W
R136	1-247-791-91	s CARBON 22 5% 1/4W
R137	1-247-807-31	s CARBON 100 5% 1/4W
R138	1-247-807-31	s CARBON 100 5% 1/4W
R139	1-247-791-91	s CARBON 22 5% 1/4W
R140	1-247-791-91	s CARBON 22 5% 1/4W
R141	1-247-791-91	s CARBON 22 5% 1/4W
R142	1-247-807-31	s CARBON 100 5% 1/4W
R143	1-247-807-31	s CARBON 100 5% 1/4W
R144	1-247-807-31	s CARBON 100 5% 1/4W
R145	1-247-791-91	s CARBON 22 5% 1/4W
R146	1-247-791-91	s CARBON 22 5% 1/4W
R147	1-247-791-91	s CARBON 22 5% 1/4W
R152	1-249-401-11	s CARBON 47 5% 1/4W
to R155		
R156	1-249-409-11	s CARBON 220 5% 1/4W
to R159		
R162	1-249-408-11	s CARBON 180 5% 1/4W
R163	1-249-408-11	s CARBON 180 5% 1/4W
R164	1-249-417-11	s CARBON 1.0K 5% 1/4W
R165	1-249-429-11	s CARBON 10K 5% 1/4W
R166	1-249-429-11	s CARBON 10K 5% 1/4W
R170	1-249-417-11	s CARBON 1.0K 5% 1/4W
R171	1-249-401-11	s CARBON 47 5% 1/4W
R172	1-259-882-11	s CARBON 3.3M 5% 1/4W
R173	1-249-401-11	s CARBON 47 5% 1/4W
R174	1-259-882-11	s CARBON 3.3M 5% 1/4W
R180	9-933-288-01	s RESISTOR BLOCK 10KX8
to R183		
R184	9-909 278-01	s RESISTOR BLOCK 10KX4
R185	9-933-053-01	s RESISTOR BLOCK 100KX4
R186	1-249-429-11	s CARBON 10K 5% 1/4W
R187	1-249-427-11	s CARBON 6.8K 5% 1/4W
R301	1-247-807-31	s CARBON 100 5% 1/4W
R302	1-247-807-31	s CARBON 100 5% 1/4W
R303	1-247-807-31	s CARBON 100 5% 1/4W
R304	1-249-401-11	s CARBON 47 5% 1/4W
R305	1-247-807-31	s CARBON 100 5% 1/4W
to R308		
R309	1-249-401-11	s CARBON 47 5% 1/4W
R310	1-249-401-11	s CARBON 47 5% 1/4W
R311	1-249-403-11	s CARBON 68 5% 1/4W
R312	1-249-401-11	s CARBON 47 5% 1/4W
R313	1-249-401-11	s CARBON 47 5% 1/4W
SW1	9-933-006-01	s SWITCH, DIP
U103	9-933-185-01	s IC TC9198P
U133	9-933-238-01	s IC TC74HC163P
U134	9-933-238-01	s IC TC74HC163P
U135	9-933-238-01	s IC TC74HC163P
U136	9-933-203-01	s IC HD74HC14P
U137	9-933-203-01	s IC HD74HC14P
U138	9-933-203-01	s IC HD74HC14P
U139	9-933-088-01	s OSCILLATOR, CRYSTAL 22.5792MHz
U140	9-933-089-01	s OSCILLATOR, CRYSTAL 24.576MHz

(SYSCON PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
U141	9-933-186-01	s IC HD74HC00P
U142	9-933-236-01	s IC HD74HC113P
U143	9-933-153-01	s IC HD74HC390P
to U146		
U147	9-933-207-01	s IC HD74HC163P
U148	9-933-207-01	s IC HD74HC163P
U149	9-933-206-01	s IC HD74HC157P
U150	8-759-008-57	s IC MC34051P
U151	9-933-237-01	s IC M74HC244-1P
U152	8-759-911-40	s IC SN74S140N
U153	9-933-091-01	s IC HD74ACT244
U154	9-933-248-01	o SYSCON CPU
U155	9-933-215-01	s IC HD74HC573P
U156	9-933-193-01	o IC ROM PCM800
U157	9-933-230-01	s IC MB8464A-10LL-SK
U158	8-759-995-09	s IC MSM6338RS
to U161		
U162	9-933-128-01	s IC HD74HC154P
U163	9-933-204-01	s IC HD74HC32P
U164	9-933-202-01	s IC HD74HC04P
U165	9-933-232-01	s IC M66500SP
U166	9-933-247-01	s IC M5M82C51AP
U167	9-933-208-01	s IC HD74HC244P
to U172		
U173	9-933-233-01	s IC M62001L
U174	9-933-129-01	s IC HD74HC240P
U175	9-933-183-01	s IC MC1648
U176	8-752-306-51	s IC CX23065A
U177	8-759-244-03	s IC TC74AC163P
U178	8-759-244-03	s IC TC74AC163P
U179	8-759-244-03	s IC TC74AC163P
U180	8-759-900-68	s IC SN74ALS30N
U181	8-759-250-81	s IC TC5081AP
U182	9-933-185-01	s IC TC9198P
U183	8-759-911-24	s IC SN74S124N
U184	8-759-250-81	s IC TC5081AP
U185	9-933-185-01	s IC TC9198P
U186	9-933-205-01	s IC HD74HC74P
U187	9-933-216-01	s IC TC74HCT04P
U188	9-933-202-01	s IC HD74HC04P
U190	9-933-236-01	s IC HD74HC113P
U191	9-933-084-01	s IC 74AC00P
U192	8-759-991-04	s IC 74AC253PC
U193	9-933-204-01	s IC HD74HC32P
U194	9-933-205-01	s IC HD74HC74P
U195	9-933-129-01	s IC HD74HC240P
U196	9-933-202-01	s IC HD74HC04P
U198	8-759-911-24	s IC SN74S124N
X3	9-933-078-01	s RESONATOR, CERAMIC 12MHz
Z1	9-933-087-01	s BEAD, FERRITE
Z2	9-933-090-01	s BEAD, FERRITE
to Z8		

TR PCB ASSY(1)

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-943-01	o TR PCB ASSY(1)
Q1	Δ 9-933-113-01	s TRANSISTOR 2SB507E

TR PCB ASSY(2)

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-944-01	o TR PCB ASSY(2)
Q2	Δ 9-933-112-01	s TRANSISTOR 2SD313E

TR PCB ASSY(3)

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-945-01	o TR PCB ASSY(3)
Q3	Δ 9-933-114-01	s TRANSISTOR 2SB686-0

6-4-2. RM-D800

CONTROL PCB ASSY

Ref. No.
or Q'ty Part No. SP Description

1pc 9-909-948-01 o CONTROL PCB ASSY
(This assembly includes the following parts.)

2pcs 7-682-548-04 s SCREW +B3X8
1pc 9-933-172-01 s SOCKET
2pcs 9-933-535-01 o HEAT SINK

BT1 Δ 9-933-077-01 s BATTERY, LITHIUM

C1 to C4 1-126-964-11 s ELECT 10uF 20% 50V
C5 Pending CAPACITOR 330PF 50V

C6 Pending CAPACITOR 330PF 50V
C7 Pending CAPACITOR 470PF 50V
C8 Pending MYLAR 0.01uF 50V
C9 Pending MYLAR 0.068uF 50V
C10 1-126-925-11 s ELECT 470uF 20% 10V

C11 Pending METAL 0.1uF 50V
C12 1-102-953-00 s CERAMIC 18PF 5% 50V
C13 1-102-953-00 s CERAMIC 18PF 5% 50V
C14 1-104-664-11 s ELECT 220uF 20% 25V
C15 Pending CAPACITOR 10000PF 10% 16V

C16 1-124-903-11 s ELECT 1uF 20% 50V
C17 1-126-935-11 s ELECT 470uF 20% 16V
C18 Pending CAPACITOR 10000PF 10% 16V
C19 1-104-666-11 s ELECT 220uF 20% 25V
C20 Pending CAPACITOR 10000PF 10% 16V

C22 Pending CAPACITOR 82PF 5% 50V
C100 1-164-159-11 s CERAMIC 0.1uF 50V
to C121

D1 8-719-901-33 s DIODE 1SS133
to D6

D7 8-719-981-50 s DIODE RB-100A
D8 8-719-820-57 s DIODE S5688G
D9 8-719-820-57 s DIODE S5688G

J1 9-933-540-01 s CONNECTOR, 15P, SOCKET
J2 9-933-541-01 s CONNECTOR, 37P, SOCKET
J3 9-933-542-01 s CONNECTOR, 9P, SOCKET

P1 9-933-606-01 o CONNECTOR, 13P, PLUG
P2 9-933-607-01 o CONNECTOR, 11P, PLUG
P3 9-933-034-01 o CONNECTOR, 9P, PLUG
P4 9-933-608-01 o CONNECTOR
P5 9-933-609-01 o CONNECTOR, 3P

Q1 Δ 9-933-610-01 s TRANSISTOR 2SB1274R
Q2 Δ 9-933-610-01 s TRANSISTOR 2SB1274R

R1 1-249-393-11 s CARBON 10 5% 1/4W
R2 1-249-393-11 s CARBON 10 5% 1/4W
R3 1-249-425-11 s CARBON 4.7K 5% 1/4W
R4 1-249-425-11 s CARBON 4.7K 5% 1/4W
R5 1-247-887-11 s CARBON 220K 5% 1/4W

R6 1-249-430-11 s CARBON 12K 5% 1/4W
R7 1-249-425-11 s CARBON 4.7K 5% 1/4W
R8 1-247-897-11 s CARBON 560K 5% 1/4W
R9 1-249-413-11 s CARBON 470 5% 1/4W
R10 1-249-419-11 s CARBON 1.5K 5% 1/4W

R11 1-249-419-11 s CARBON 1.5K 5% 1/4W
R12 1-247-807-31 s CARBON 100 5% 1/4W
R13 1-247-864-11 s CARBON 24K 5% 1/4W
R14 1-247-864-11 s CARBON 24K 5% 1/4W

(CONTROL PCB ASSY)

Ref. No.
or Q'ty Part No. SP Description

R15 1-247-807-31 s CARBON 100 5% 1/4W
R16 1-249-425-11 s CARBON 4.7K 5% 1/4W
R17 1-249-425-11 s CARBON 4.7K 5% 1/4W
R18 1-249-422-11 s CARBON 2.7K 5% 1/4W
R19 1-249-417-11 s CARBON 1.0K 5% 1/4W

R20 9-933-116-01 s CARBON 220
R21 1-249-409-11 s CARBON 220 5% 1/4W
R22 1-249-431-11 s CARBON 15K 5% 1/4W
R23 1-249-423-11 s CARBON 3.3K 5% 1/4W
R24 1-249-425-11 s CARBON 4.7K 5% 1/4W

R25 1-249-425-11 s CARBON 4.7K 5% 1/4W
R26 1-249-401-11 s CARBON 47 5% 1/4W
R27 1-249-434-11 s CARBON 27K 5% 1/4W
R28 1-249-429-11 s CARBON 10K 5% 1/4W
R29 1-249-429-11 s CARBON 10K 5% 1/4W

R30 1-249-425-11 s CARBON 4.7K 5% 1/4W
R31 1-247-903-00 s CARBON 1.0M 5% 1/4W
R32 Δ 9-933-629-01 s RESISTOR 0.15 5W
R33 Δ 9-933-629-01 s RESISTOR 0.15 5W
R35 1-249-417-11 s CARBON 1.0K 5% 1/4W

R36 1-247-791-91 s CARBON 22 5% 1/4W
R37 Pending CARBON 3.3
R100 9-933-611-01 s RESISTOR BLOCK 47KX8
R101 9-933-611-01 s RESISTOR BLOCK 47KX8
R102 9-933-612-01 s RESISTOR BLOCK 10KX8

R103 9-933-627-01 s RESISTOR BLOCK 10KX4
R104 9-933-627-01 s RESISTOR BLOCK 10KX4
R200 9-933-628-01 s RES, ADJ 20K

S1 9-933-630-01 s SWITCH, DIP 4-CKT
S2 9-933-631-01 s SWITCH, PUSH

U1 9-933-632-01 o CONTROL CPU
U2 9-933-637-01 o IC ROM, RM-D800
U3 9-933-491-01 s IC LH52250A-10TL
U4 9-933-247-01 s IC M5M82C51AP
U5 8-759-917-52 s IC 74F138PC

U6 9-933-645-01 s IC HD74HC393P
U7 9-933-646-01 s IC HD74HC153P
U8 9-933-645-01 s IC HD74HC393P
U9 9-933-647-01 s IC MC14046B
U10 9-933-633-01 s IC UPD4711AC

U11 9-933-205-01 s IC HD74HC74P
U12 9-933-205-01 s IC HD74HC74P
U13 8-759-176-24 s IC M66800FP
U14 9-933-635-01 s IC M75179P
U15 9-933-635-01 s IC M75179P

U16 8-759-915-41 s IC 74F02PC
U17 9-933-203-01 s IC HD74HC14P
U18 9-933-203-01 s IC HD74HC14P
U19 9-933-203-01 s IC HD74HC14P
U20 8-759-605-43 s IC M5231TL

U21 8-759-203-90 s IC TD62504P
U23 8-759-603-69 s IC M51957BL
U24 8-759-603-69 s IC M51957BL
U25 9-933-641-01 s OSCILLATOR, CRYSTAL 9.6MHz
U26 8-759-900-15 s IC SN74LS15N

X1 9-933-648-01 s CRYSTAL 9.8304MHz

----- OPERATION PCB ASSY -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-949-01	o OPERATION PCB ASSY (This assembly includes the following parts.)
4pcs	7-621-770-67	s SCREW +B2.6X6
1pc	9-933-650-01	s LCD DMO73Z-7BL3
67pcs	9-933-651-01	o SPACER
2pcs	9-933-652-01	o LCD BRACKET
C1 to C6	9-933-173-01	s CAPACITOR 100PF 50V
C100 to C105	1-164-159-11	s CERAMIC 0.1uF 50V
D1 to D99	8-719-901-33	s DIODE ISS133
D200	9-933-263-01	s LED SLR-34VR3F, RED
D201	9-933-264-01	s LED SLR-34MG3F, GRN
D202 to D207	9-933-266-01	s LED SLR-34DU3F, ORG
D208	8-719-950-78	s LED LD-001DU, ORG
D209	8-719-950-78	s LED LD-001DU, ORG
D210	1-809-488-11	s LED LD-101MG, GRN
D211	9-933-655-01	s LED LD-101DU, ORG
D212	1-809-488-11	s LED LD-101MG, GRN
D213 to D218	8-759-950-78	s LED LD-001DU, ORG
D219 to D233	9-933-655-01	s LED LD-101DU, ORG
D234	9-933-264-01	s LED SLR-34MG3F, GRN
D235	9-933-263-01	s LED SLR-34VR3F, RED
D236 to D241	9-933-266-01	s LED SLR-34DU3F, ORG
D242	9-933-263-01	s LED SLR-34VR3F, RED
D243	9-933-266-01	s LED SLR-34DU3F, ORG
D244	9-933-266-01	s LED SLR-34DU3F, ORG
D245 to D292	9-933-263-01	s LED SLR-34VR3F, RED
P1	9-933-606-01	s CONNECTOR, 13P, PLUG
P2	9-933-607-01	s CONNECTOR, 11P, PLUG
P3	9-933-658-01	s CONNECTOR, 14P, PLUG
P4	9-933-659-01	s CONNECTOR, 2P, PLUG
R1 to R15	1-249-393-11	s CARBON 10 5% 1/4W
R16 to R31	1-249-393-11	s CARBON 10 5% 1/4W
R32 to R38	1-247-804-11	s CARBON 75 5% 1/4W
R39 to R46	1-249-404-00	s CARBON 82 5% 1/4W
R47	1-247-391-11	s CARBON 6.8 5% 1/4W
R48 to R53	1-247-807-31	s CARBON 100 5% 1/4W
R62	1-247-807-31	s CARBON 100 5% 1/4W
S1 to S6	9-909-988-01	s SWITCH, PUSH
S7 to S99	9-933-661-01	s SWITCH, PUSH

(OPERATION PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
U1	8-759-234-67	s IC TMP82C79M-2
U2	8-759-234-67	s IC TMP82C79M-2
U3	9-933-182-01	s IC TC74HC138AP
U4	9-933-182-01	s IC TC74HC138AP
U5	9-933-235-01	s IC HD74HC4514P
U6	9-933-235-01	s IC HD74HC4514P
U7	8-759-634-75	s IC M54585P
U8	8-759-634-75	s IC M54585P
U9 to U12	9-933-184-01	s IC M54564P
U13 to U21	8-719-018-45	s LED SL1283

----- JOG PCB ASSY -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-951-01	o JOG PCB ASSY (This assembly includes the following parts.)
1pc	7-621-770-67	s SCREW +B2.6X6
1pc	9-933-665-01	s JOG SHUTTLE ENCODER

----- V-REG PCB ASSY -----

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-909-950-01	o V-REG PCB ASSY (This assembly includes the following parts.)
C1	9-933-664-01	s METAL 0.1uF 50V
C2	9-933-664-01	s METAL 0.1uF 50V
U1	Δ 9-933-220-01	s IC M5F7805L

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----- SYNC PCB ASSY -----

Ref. No. or Q'ty	Part No.	SP Description
2pcs	7-682-547-04	s SCREW +B3X6
1pc	9-933-172-01	s SOCKET
1pc	9-933-366-01	s IC SOCKET, 20P
1pc	9-933-368-01	s IC SOCKET, 84P
1pc	9-933-369-01	s CONNECTOR, 2P, SOCKET
2pcs	9-933-370-01	s SCREW M2.6X0.45
1pc	9-933-371-01	o PANEL, SYNC
1pc	9-933-372-01	o SHIELD, SYNC
4pcs	9-933-605-01	s SCREW M3X8
C1	1-126-059-11	s ELECT 10uF 20% 63V
C3	1-164-159-11	s CERAMIC 0.1uF 50V
C4	1-102-824-00	s CERAMIC 470PF 5% 50V
C5	1-126-163-11	s ELECT 4.7uF 20% 25V
C6	1-102-947-00	s CERAMIC 10PF 50V
C7	1-164-159-11	s CERAMIC 0.1uF 50V
C8	1-102-816-00	s CERAMIC 120PF 5% 50V
C9	1-101-884-00	s CERAMIC 56PF 5% 50V
C10	1-126-161-11	s ELECT 2.2uF 20% 25V
C11	Pending	CAPACITOR 390PF 100V
C12	1-164-159-11	s CERAMIC 0.1uF 50V
C13	1-164-159-11	s CERAMIC 0.1uF 50V
C14	1-164-159-11	s CERAMIC 0.1uF 50V
C15	Pending	METAL 0.1uF 50V
C16	Pending	CAPACITOR 470PF 100V
C17	1-164-159-11	s CERAMIC 0.1uF 50V
C18	1-164-159-11	s CERAMIC 0.1uF 50V
C19	1-124-994-11	s ELECT 100uF 20% 10V
C20	1-164-159-11	s CERAMIC 0.1uF 50V
C21	Pending	METAL 0.68uF 50V
C22	1-164-159-11	s CERAMIC 0.1uF 50V
C23	Pending	METAL 0.015uF 50V
C24	1-126-059-11	s ELECT 10uF 20% 63V
C25	1-164-159-11	s CERAMIC 0.1uF 50V
C26	Pending	METAL 0.22uF 50V
C27	1-164-159-11	s CERAMIC 0.1uF 50V
C28	1-126-059-11	s ELECT 10uF 20% 63V
C29	Pending	METAL 1.0uF 50V
C30	1-164-159-11	s CERAMIC 0.1uF 50V
C31	1-164-159-11	s CERAMIC 0.1uF 50V
C32	1-124-994-11	s ELECT 100uF 20% 10V
C33	1-164-159-11	s CERAMIC 0.1uF 50V
to C40		
C41	Pending	METAL 0.1uF 50V
C42	1-164-159-11	s CERAMIC 0.1uF 50V
to C48		
C51	Pending	METAL 0.12uF 50V
C52	1-164-159-11	s CERAMIC 0.1uF 50V
C53	1-124-994-11	s ELECT 100uF 20% 10V
C54	1-164-159-11	s CERAMIC 0.1uF 50V
C55	1-164-159-11	s CERAMIC 0.1uF 50V
C56	1-102-852-41	s CERAMIC 47PF 5% 50V
C57	1-164-159-11	s CERAMIC 0.1uF 50V
C58	1-124-994-11	s ELECT 100uF 20% 10V
C59	1-124-994-11	s ELECT 100uF 20% 10V
C60	1-164-159-11	s CERAMIC 0.1uF 50V
C64	1-164-159-11	s CERAMIC 0.1uF 50V
C65	1-164-159-11	s CERAMIC 0.1uF 50V
C66	1-164-159-11	s CERAMIC 0.1uF 50V

(SYNC PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
C68	1-164-159-11	s CERAMIC 0.1uF 50V
C69	1-164-159-11	s CERAMIC 0.1uF 50V
C71	1-164-159-11	s CERAMIC 0.1uF 50V
C72	1-164-159-11	s CERAMIC 0.1uF 50V
C73	1-126-022-11	s ELECT 47uF 20% 25V
C74	1-164-159-11	s CERAMIC 0.1uF 50V
C77	1-164-159-11	s CERAMIC 0.1uF 50V
C80	Pending	MYLAR 0.001uF 50V
C81	1-164-159-11	s CERAMIC 0.1uF 50V
C83	1-164-159-11	s CERAMIC 0.1uF 50V
C84	1-126-022-11	s ELECT 47uF 20% 25V
C85	1-164-159-11	s CERAMIC 0.1uF 50V
C86	1-164-159-11	s CERAMIC 0.1uF 50V
C87	1-164-159-11	s CERAMIC 0.1uF 50V
C89	1-164-159-11	s CERAMIC 0.1uF 50V
C90	1-164-159-11	s CERAMIC 0.1uF 50V
C91	1-164-159-11	s CERAMIC 0.1uF 50V
to C97		
C98	1-164-159-11	s CERAMIC 0.1uF 50V
C99	1-164-159-11	s CERAMIC 0.1uF 50V
C101	1-124-903-11	s ELECT 1uF 20% 50V
C102	1-102-973-00	s CERAMIC 100PF 5% 50V
D1	8-719-901-33	s DIODE 1SS133
to D14		
J1	9-933-373-01	s JACK, PIN 2P
J2	9-933-374-01	s CONNECTOR, DSUB 9P, SOCKET
J3	9-933-031-01	s CONNECTOR, BNC, SOCKET
J4	9-933-375-01	s DIN, SOCKET
L3	9-909-965-01	s COIL, CHOKO 10uH
L4	9-909-965-01	s COIL, CHOKO 10uH
P1	9-933-025-01	o CONNECTOR, 100P, PLUG
P2	9-933-376-01	o CONNECTOR, PLUG
Q1	8-729-281-53	s TRANSISTOR 2SC1815-GR
Q2	8-729-281-53	s TRANSISTOR 2SC1815-GR
R1	1-249-429-11	s CARBON 10K 5% 1/4W
R2	1-249-419-11	s CARBON 1.5K 5% 1/4W
R3	1-249-419-11	s CARBON 1.5K 5% 1/4W
R4	1-249-429-11	s CARBON 10K 5% 1/4W
R5	1-249-417-11	s CARBON 1.0K 5% 1/4W
R6	1-249-429-11	s CARBON 10K 5% 1/4W
R7	1-249-417-11	s CARBON 1.0K 5% 1/4W
R8	1-249-429-11	s CARBON 10K 5% 1/4W
R10	1-249-428-11	s CARBON 8.2K 5% 1/4W
R11	1-247-807-31	s CARBON 100 5% 1/4W
R12	1-249-435-11	s CARBON 33K 5% 1/4W
R13	1-249-426-11	s CARBON 5.6K 5% 1/4W
R14	1-249-435-11	s CARBON 33K 5% 1/4W
R15	1-249-429-11	s CARBON 10K 5% 1/4W
R16	1-249-429-11	s CARBON 10K 5% 1/4W
R17	1-249-439-11	s CARBON 68K 5% 1/4W
R18	1-249-439-11	s CARBON 68K 5% 1/4W
R19	1-247-791-91	s CARBON 22 5% 1/4W
to R22		
R23	1-249-422-11	s CARBON 2.7K 5% 1/4W
R24	1-247-807-31	s CARBON 100 5% 1/4W

(SYNC PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
R25	1-249-434-11	s CARBON 27K 5% 1/4W
R26	1-249-422-11	s CARBON 2.7K 5% 1/4W
R27	1-249-434-11	s CARBON 27K 5% 1/4W
R28	1-247-804-11	s CARBON 75 5% 1/4W
R29	1-249-417-11	s CARBON 1.0K 5% 1/4W
R30	1-249-415-11	s CARBON 680 5% 1/4W
R32	1-249-441-11	s CARBON 100K 5% 1/4W
R33	1-249-429-11	s CARBON 10K 5% 1/4W
R34	1-249-408-11	s CARBON 180 5% 1/4W
R35	1-247-807-31	s CARBON 100 5% 1/4W
R36	1-247-903-00	s CARBON 1.0M 5% 1/4W
R37	1-249-429-11	s CARBON 10K 5% 1/4W
R38	1-249-422-11	s CARBON 2.7K 5% 1/4W
R39	1-247-807-31	s CARBON 100 5% 1/4W
R40	1-247-903-00	s CARBON 1.0M 5% 1/4W
R41	1-249-417-11	s CARBON 1.0K 5% 1/4W
R42	1-247-899-11	s CARBON 680K 5% 1/4W
R43	1-249-417-11	s CARBON 1.0K 5% 1/4W
R44	1-249-409-11	s CARBON 220 5% 1/4W
R45	1-249-429-11	s CARBON 10K 5% 1/4W
R46 to R49	1-249-409-11	s CARBON 220 5% 1/4W
R50	1-249-410-11	s CARBON 270 5% 1/4W
R56	1-247-872-11	s CARBON 51K 5% 1/4W
R57	1-249-432-11	s CARBON 18K 5% 1/4W
R58	1-247-838-11	s CARBON 2.0K 5% 1/4W
R59	1-247-863-91	s CARBON 22K 5% 1/4W
R60	1-249-435-11	s CARBON 33K 5% 1/4W
R62 to R65	1-249-425-11	s CARBON 4.7K 5% 1/4W
R66	9-933-288-01	s RESISTOR BLOCK 10KX8
R67	1-249-415-11	s CARBON 680 5% 1/4W
R69	1-249-417-11	s CARBON 1.0K 5% 1/4W
R71	9-933-288-01	s RESISTOR BLOCK 10KX8
R74	1-249-421-11	s CARBON 2.2K 5% 1/4W
R75 to R81	1-249-425-11	s CARBON 4.7K 5% 1/4W
R82	1-249-401-11	s CARBON 47 5% 1/4W
R83	9-933-288-01	s RESISTOR BLOCK 10KX8
R84	9-933-288-01	s RESISTOR BLOCK 10KX8
R85	1-249-439-11	s CARBON 68K 5% 1/4W
R87	1-247-887-11	s CARBON 220K 5% 1/4W
R89	1-249-413-11	s CARBON 470 5% 1/4W
R91	1-249-425-11	s CARBON 4.7K 5% 1/4W
R92	1-249-425-11	s CARBON 4.7K 5% 1/4W
S1	9-933-377-01	s SWITCH, DIP
S2	9-933-378-01	s SWITCH, DIP 8-CKT
S3	9-933-378-01	s SWITCH, DIP 8-CKT
U1	9-933-202-01	s IC HD74HC04P
U2	8-759-106-41	s IC UPC4570C
U3	8-759-008-57	s IC MC34051P
U4	9-933-185-01	s IC TC9198P
U5	8-759-951-24	s IC SN75124N
U7	8-759-972-26	s IC LM1881N
U8	9-933-382-01	s IC MC74HC4538N
U9	9-933-383-01	s IC TC74HC4066AP
U10	8-759-135-80	s IC UPC358C

(SYNC PCB ASSY)

Ref. No. or Q'ty	Part No.	SP Description
U11	8-759-135-80	s IC UPC358C
U12	8-759-604-35	s IC M5F78M05L
U13	9-933-457-01	s IC VCO MODULE
U14	9-933-458-01	s IC MC74HC390N
U15	9-933-185-01	s IC TC9198P
U21	9-933-205-01	s IC HD74HC74P
U22	8-759-250-81	s IC TC5081AP
U23	9-933-459-01	s IC SN74LS624
U24	9-933-185-01	s IC TC9198P
U25	8-759-232-01	s IC TC74HC00AP
U26	9-933-461-01	s IC UPD65013
U27	9-933-461-01	s IC UPD65013
U30	9-933-204-01	s IC HD74HC32P
U31	9-933-083-01	o IC ROM DABK-801
U32	8-759-232-01	s IC TC74HC00AP
U33	8-759-149-06	s IC UPD71054C-10
U34	9-933-484-01	o SYNC CPU
U35	9-933-485-01	o IC DRAM M66220
U36	9-933-206-01	s IC HD74HC157P
U37	8-759-233-61	s IC TC74HC7266AP
U38	8-759-231-66	s IC TC74HC4053AP
U39	9-933-205-01	s IC HD74HC74P
U41	8-719-938-71	s PHOTO COUPLER PC900
U42	8-759-232-01	s IC TC74HC00AP
U43	9-933-646-01	s IC HD74HC153P
U44	9-933-646-01	s IC HD74HC153P
U47	9-933-202-01	s IC HD74HC04P
U48	9-933-215-01	s IC HD74HC573P
U49	8-759-232-01	s IC TC74HC00AP
U50	9-909-983-01	s IC EMI FILTER
U51	1-249-381-11	s CARBON 1.0 5% 1/4W
U52	9-909-983-01	s EMI FILTER
U53	9-909-983-01	s EMI FILTER
U54	9-933-234-01	s IC HD74HC541P
U55	9-933-490-01	s IC M5M82C55AP-2
U56	9-933-491-01	s IC LH52250A-10TL
U57	9-933-492-01	o IC PAL16V8 SY-88
X3	9-933-493-01	s OSCILLATOR, CRYSTAL 19.6608MHz

6-5. Accessories Supplied

6-5-1. PCM-800

Ref. No. or Q'ty	Part No.	SP Description
1pc	△ 1-551-812-11	s CORD, POWER SUPPLY (FOR UC)
1pc	△ 1-590-910-11	s CORD SET, POWER SUPPLY (FOR CE)
1pc	8-883-112-29	s CASSETTE, CLEANING (V8-6CLHSP)

6-5-2. RM-D800

Ref. No. or Q'ty	Part No.	SP Description
1pc	9-933-533-01	s CABLE, REMOTE (5m)
1pc	9-933-534-01	s TERMINATOR, SYNC

6-5-3. DABK-801

Ref. No. or Q'ty	Part No.	SP Description
1pc	7-682-547-04	s SCREW +B3x6
2pcs	9-933-410-01	s SCREW +BV3x6
1pc	9-933-456-01	o REAR PANEL, REA/AES

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